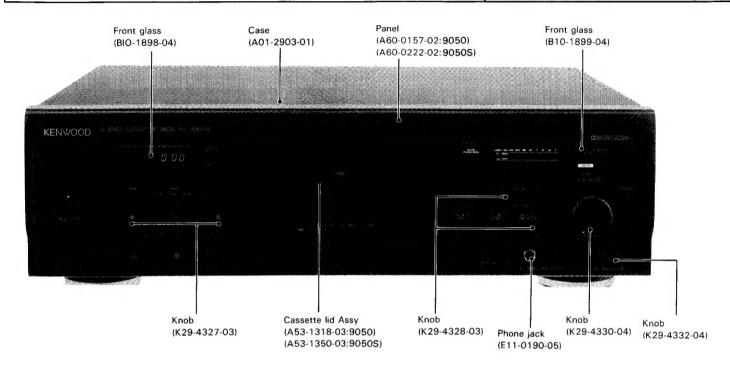
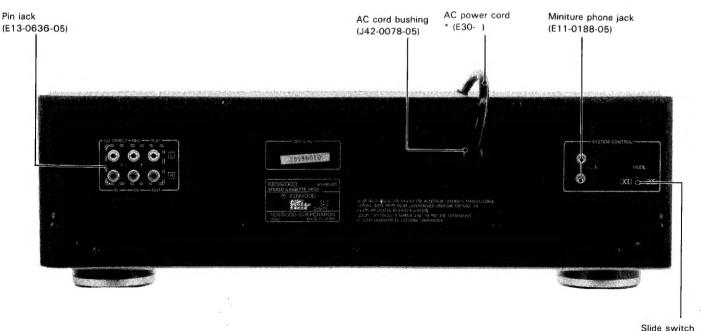
# KX-9050/S SERVICE MANUAL

# **KENWOOD**

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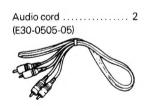
(S31-2094-05)

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### **ACCESSORIES**



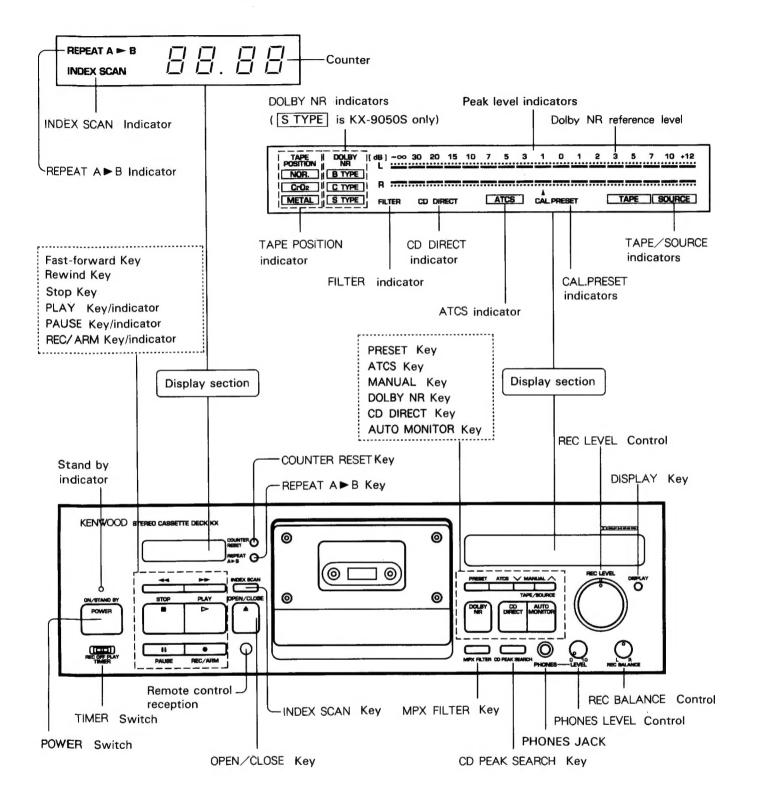
System control cord ...... 1 (Except for the U.K. and Europe) (E30-0977-05)



INSTRUCTION MANUAL

B60-0688-00 ENGLISH B60-0689-00 FRENCH B60-0691-00 GE, DU, IT

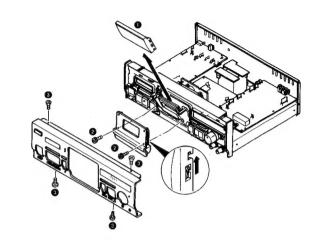
### **CONTROLS & INDICATORS**



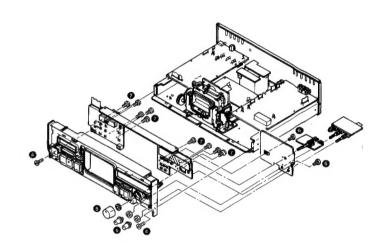
### **DISASSEMBLY FOR REPAIR**

Remove the case in advance.

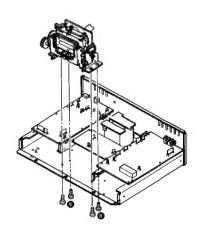
- ① Push the EJECT button to open the cassette holder. Remove the cassette lid in the arrow direction (1).
- Remove the cassette lid back plate by removing the 2 screws (2).
- 3 Remove the front panel by removing the 4 screws (3).
- 4 Remove the sub panel ASSY by removing the 2 screws 4.



- (6) Remove the REC LEVEL, REC BALANCE and PHONES LEVEL knobs (6), and remove the two screws (6) of the mounting fitting in order to remove E/8 and F/8 of X25.
- The display units X25B/8, C8 and D/8 can be removed when the 9 screws (2) are removed.



7 The mechanism ASSY can be removed when the 4 screws (3) are removed.



# **CIRCUIT DESCRIPTION**

#### (X25-4712)

No	Name	Function/Description				
IC81	TA8410AK	HEAD PHONE AMP				
IC82	PC4565D-D	LINE BUFFER				
IC95	PC4565D-D	LEVEL AMP BUFFER				
IC96	BA6138	LOG AMP				
IC702	μ PC7805AHF	+5V AVR				
IC703	μ PC7812AHF	+12V AVR				
IC704	BA6229	REEL MOTOR DRIVE				
IC705	BA6209	ASSYST MOTOR DRIVE				
IC706	BA6209	LORDING MOTOR DRIVE				
IC707	BA10393	REEL PULSE DRIVE				
IC708	PST5290	RESET IC				
IC710	CXP82320-1050	μ -COM				
Q92	2SC3311A	RESET				
Q95,96	2SC3311A	LOG AMP GAIN CONTROL				
Q97	2SC3311A	LINE AMP(IC95) Rch GAIN CONTROL ATCS : ON				
Q700	DTA143TS	BIAS CONTROL INVETER				
Q701	2SB1375	-30V AVR				
Q702	2SA1309A	-30V AVR				
Q703	DTC124ES	POWER ON/OFF CONTROL	ON :POWER ON			
Q704	2SA1309A	REC MUTE CONTROL	ON : MUTE ON			
Q705	2SA1309A	LINE MUTE CONTROL	ON : MUTE ON			
Q706	2SA1309A	ATCS CONTROL	ON : ATCS			
Q707	DTC143TS	OSC FIL	ON : 10kHz			
Q708	DTC124ES	ATCS OSC CONTROL	OFF : ATCS			
Q709	2SC3311A	REEL MOTOR CONTROL	ON :			
Q710~712	DTC113ZS	GRID DRIVER				
Q713	2SC3311A	RELAY DRIVER	ON : POWER ON			
Q714	2SA1309A	RELAY CONTROL				
Q715	DTA143TS	OSC FIL CONTROL	ON : 10kHz			
Q716	2SC3311A	CAPSTAN MOTOR CONTROL	ON : MOTOR ON			

#### (X26-1292)

NO	Name	Function/Description	Function/Description				
IC1	RC4565D-D or NJM4565D-D	PB EQ AMP					
IC2	CXA13305	DOL B/C decorder					
IC11	CXA13305	DOL B/C encorder					
IC21	RC4565D-D	REC EQ AMP					
IC31	μ PC1297CA	HX IC					
IC41	RC4565D-D	±8V AVR					
IC42	XRU4052B or TC4052BP	Change DOL B/C, S SELECT TAPE, SOURCE SELECT	H L A B/C S B TAPE SOURCE				
IC51	TC9164N	TAPE SELECT / AUTO BIAS / DOLBY CONTROL	TAPE SELECT / AUTO BIAS / DOLBY CONTROL				
IC52	TC9162N	REC LEVEL / INPUT / DOLBY CONTROL	REC LEVEL / INPUT / DOLBY CONTROL				

# **CIRCUIT DESCRIPTION**

### (X26-1292)

No	Name	Function/Description
Q1~4	2SK170	HEAD AMP
Q5,6	2SK170	Change 70 μ / 120 μ controled IC51 8 ,10 pin.
Q7~10	2SC3311A	HEAD AMP
Q11~14	DTC143TS	Control IC51, 22 pin MPX ON/OFF
Q15	DTC124ES	When ,ATCS OFF the DOLBY
Q19,20	2SC3311A	REC EQ CONTROL CrO₂ TAPE : ON
Q21~24	2SD1302	REC MUTE
Q25,26	2SC3311A	REC EQ CONTROL CrO2 TAPE : ON
Q27,28	2SC3311A	REC EQ CONTROL METAL TAPE : ON
Q29,30	2SC3311A	REC EQ CONTROL METAL TAPE : OFF
Q31,32	2SC3940A	BIAS OSC
Q33	2SC3246	BIAS OSC CURRENT CONTROL
Q34	DTC143TS	BIAS OSC ON/OFF CONTROL REC : OFF
Q35	DTC143TS	HX ON/OFF CONTROL REC : OFF
Q41~44	2SD1302	LINE MUTE
Q45	2SD2012	+8V AVR
Q46	2SB1375	-8V AVR
Q47	DTC124ES	POWER ON/OFF CONTROL POWER ON : ON
Q48	DTC113Z	Control IC 42,10 pin B by IC710 4 pin DOLS, IC51 7 pin TAPE/SOURCE.
Q49,50	DTC124ES	) Solution 10 42, 10 pin b by 107 10 4 pin Bollo, 1001 7 pin TAPE/300 NCE.

# **CIRCUIT DESCRIPTION**

#### Key description

Key name	Description	Display
FWD PLAY ►	If there is a cassette in the drive, it is played back in the forward direction. One track is repeated when this key is pushed during FWD playback.	LED lights up. ►
FF ▶►	Tape wound at high speed onto right-hand reel. Skipped track selection when pushed during playback.	
RWD	Tape wound at high speed onto left-hand reel. Skipped track selection when pushed during playback. REC standby when pushed during FWD REC.	
STOP	All operations are stopped.	
REC/ARM	Recording starts when pushed during STOP, REC PAUSE, ARM. If recording is in progress, ARM starts.	LED lights up. ●
PAUSE	REC PAUSE when pushed during recording, PLAY PAUSE when pushed during playback.	LED lights up. [[
COUNTER RESET	Resets linear counter to 0.00.  Maintains 0.00 count when key is held down.  Stops when key is pressed during zero stop.  Invalid during DPSS track selection.	0.00
DOLBY NR	Switches the Dolby noise reduction. OFF→B→C→S (Cyclic)	
DISPLAY	Switches the display. All Display→Counter Only→All Off (Cyclic) Returns to ALL DISPLAY when POWER is turned ON. ALL DISPLAY turns ON for 3 sec, and then turns OFF when this key is pushed when DISPLAY is OFF.	
CDPS	Changes over to REC PAUSE, and then switches MONITOR to SOURCE when CD peak search key is pressed.	PLAY, REC PAUSE LED light up. ► ●
A/B REPEAT	Plays the section A-B of the tape back. (Only during playback) When the key is first pressed, point A is memorized, and when the key is pressed again, point B is memorized. When REWIND is pressed, playback starts from point A, and is repeated 16 times.  — If any other key is pressed, the A-B repeat function is cancelled. Returns to normal operation offer 16 times.  At least 10-second spacing required between points A and B.	
ATCS	Automatic adjustment of BIAS and LEVEL. Reset when pressed after presetting.	ATCS
PRESET	ATCS preset: The current optimum bias value and level value are stored in the memory.  ATCS not preset: The memory is recalled.	CAL PRESET
BIAS CONTROL	Fine adjustment (± 3 steps) of bias. Valid only when ATCS is lit. (Irrespective of mechanism operation).	CAL
AUTO MONITOR	Performs TAPE/SOURCE switching. Switches automatically to TAPE during PLAY and REC. Switches automatically to SOURCE during REC PAUSE. Performs forcible switching to TAPE and is locked therein during DPSS.	
POWER	Turns the POWER ON when first pressed, and turns it OFF when pressed again. Can not be pressed repeatedly within 1 second.	
CD DIRECT	Input signal (CD) can be recorded without passing through the volume. It can be turned ON/OFF also during recording.	CD DIRECT
OPEN/CLOSE	Opens/closes the door. If pressed when the mechanism is operating, it stops the mechanism, and then opens the door. Opens/closes the door also when the POWER is OFF.	
MPX FILTER	Turns the MPX filter ON/OFF. This function is cancelled when CD DIRECT is ON, and returns to the original state when it is OFF.	FILTER

# **CIRCUIT DESCRIPTION**

Operation description (DPSS)

Key name	Description	Display
INDEX SCAN	Beginning of each track is played back successively for approximately 10 seconds.	Flickering Number of playbacks
Zero stop	Stops the counter at 0.00	
FF search	Skips forth (relative to the playback direction) the number of tracks (up to 16) equivalent to the number of times the FF key is pressed.  If FF is pressed again during FF search, the number of times the key is pressed is added to the number of tracks to be skipped.	Number of Number of key entries tracks
RWD search	Skips back (relative to the playback direction) the number of tracks (up to 16, including the current track) equivalent to the number of times the REW key is pressed.  If the RWD key is pressed during RWD search, the number of times the key is pressed is added to the number of track to be skipped.	Number of playbacks
One-track repeat	The current track is played back 16 times repeatedly, and then the normal playback is resumed, when the PLAY key is pressed once during playback or twice during any other operation. When the PLAY key is pressed again while a track is being repeated, the track is repeated 16 times from that time.	Number of playbacks
Rewind play ◄◀ & ►	When the RWD and PLAY keys are pressed together, the tape is rewound to its end (RWD), and then a FF search is done on the forward side. When the first track is detected, playback starts.	
Dash & Play ◀◀ & ▶▶	Playback is performed when FF and RWD keys are pressed together. Cues and searches for the next track If a blank section continues for 10 seconds during playback. Playback is resumed when a track is found. This is repeated 16 times (16 sides).	Number of playbacks.
Rerec standby	If RWD key is pressed during REC, tape is reviewed (RVW) and played back when end of previous track is found. Playback lasts 2 seconds and then stops.	
Auto rec mute	If REC key is pressed again during recording, or REC key is pressed twice during STOP or REC PAUSE, REC MUTE turns ON for 4 seconds, recording is performed, and then REC PAUSE is resumed.	

### CIRCUIT DESCRIPTION

#### **Dolby S Noise Reduction**

Figure. 1 indicates the basic block diagram of the Dolby S NR concept.

It operates as a decoder when the Dolby S ENCODER unit is placed within the OP1 NF loop, and operates as an encoder when it is place outside it.

Input level settings are as follows:

During encode:  $-6 \text{ dBm } -20 \log (1 + R1/R2)$ 

During decode:  $-6 \text{ dBm } -20 \log (1 + R3/R4)$ 

The test point and Dolby level will be -6 dBm (388 mV) during encode input with a 400- Hz sine wave signal.

Figure. 2 indicates the block diagram for the Dolby S encoder.

As with Dolby C, it has a two-level phase process (high-level phase and low-level phase); however, the difference is that to improve the noise in the low-frequencies (40-200 Hz), a low-frequency fixing band is added to the high level and a high-frequency fixing band is added to correct the noise in the high level, low level, and middle range (400-12.8 kHz). At this time, the role of the high-range fixing band will be used to correct the noise in music signals even when there are numerous high-range spectrums that are at a high level. In this case, the boost frequency will fall out side the audible range if only the sliding band is available, and the operations will be completed even when the noise connot be corrected. Furthermore, a control signal to validly operate every respective sliding band, high-range fixed band, and low-range fixed band comes in four-types, MC1 ~ 4, and each signal processing portion is combined with the internal control signal to undergo operations.

Figure. 3 shows the block diagram for the Dolby S noise reduction IC (CXA1417S).

The low range is 10 dB and the high range is 24 dB as the noise reduction effect. In addition, a tape recorded in Dolby S is compatible with Dolby B play back.

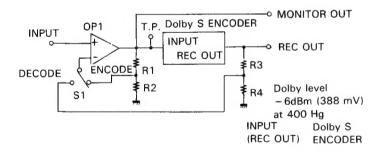


Fig. 1 Block Diagram

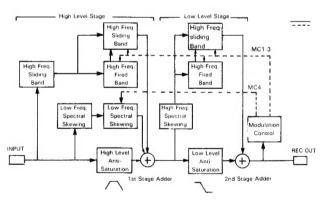


Fig. 2 Dolby S Encoder Block Diagram

### CIRCUIT DESCRIPTION

#### 1. Block Diagram

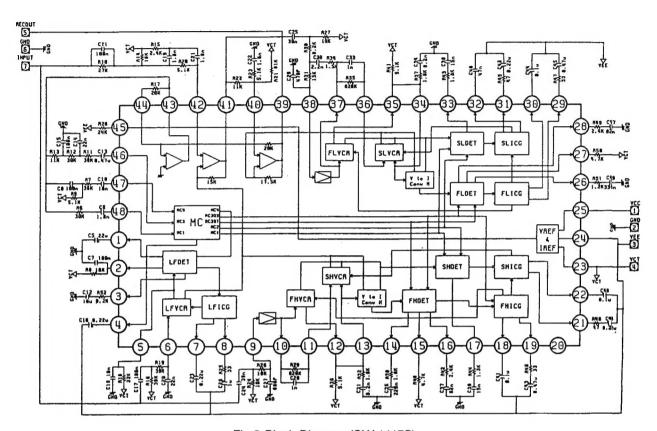


Fig.3 Block Diagram (CXA1417S)

#### Point to note when using Dolby S IC (CXA1417S)

#### (1) DC Check (when no signal)

Termi	nal	V	oltage (V)
Name	Pin No	TYPE	Measured value
MCTC	4	-3.9	$-3.9 \pm 0.3$
TCL 1 TCL 2	7 8	-4.6	-4.0 ~ -5.0
TCF1H TCF2H	18 19	-4.6	-3.8 ~ -5.0
VRX	20	-3.4	-3.4 ~ -3.8
TCS2H TCS1H	21 22	-4.6	-4.6 ~ -5.0
TCF2L TCF1L	29 30	-4.6	-3.6 ~ -5.0
TCS2L TCS1L	31 32	-4.6	-4.6 ~ -5.0
IREF	45	-4.8	-4.8 ~ -5.1
OTHER		0.0	0.0

Note: If there is a solder bridge or a "whiskered" solder, the observed voltage cannot be obtained.

#### (2) Checking the Frequency Characteristics

Defective frequency characteristics (1) will be caused by defective soldering of parts, even if the terminal voltage has been thoroughly checked. The quaity of the product cannot be determined without checking the frequency characteristics of both the encoder and decoder at the Dolby level and at the Dolby level of  $-20 \, \mathrm{dB}$ .

#### How to check the encoder (Turn MPX Filter off

- (i) Set the S-type encoder INPUT (at test point (T .P.)) to 400 Hz and a -6 dBm (388 mV) Dolby level to adjust the AG output level.
- (ii) Alter the AG frequency through 20, 50, 100, 4 00 2k, 5k, 10k and 20k Hz reading the REC OUT leve I while maintaining the status described in (i), then check that the REC OUT levels are within ± 1.5 dB.
- (iii) Set the S-type encoder INPUT (at T.P.) to 4(0 Hz and a 26.0 dBm (38.8 mV) Dolby level to adjust the AG output level.
- (iv) Repeat step (ii).
- (v) Check the left and right channels when at he Dolby level and the −20 dB Dolby level.

### **CIRCUIT DESCRIPTION**

#### How to check the decoder

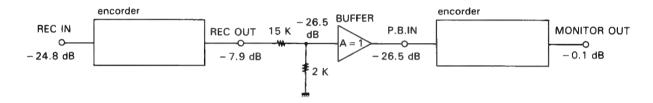
- (i) Set the S-type encoder INPUT (point T.P.) to 400 Hz and a - 6 dBm (388 mV) Dolby level to adjust the AG output level. Then program the REC OUT output level.
- (ii) While altering the AG frequency through 20, 50, 100, 400, 2k, 5k, 10k and 20 k Hzp correct the S-type NR encod characteristics to the REC OUT output level programmed in step (i), and adjust the AG output level to check whether the INPUT (point T.P.) levels are within ± 1.5 dB.
- (iii)Adjust the AG output level so that it will be -20 dB lower than the REC OUT output level programmed in step (i).

- (iv)Repeat step (ii).
- (V) Check the left and right channels when at the Dolby level and the -20 dB Dolby level.

#### Checking with both the encoder and decoder.

Basically, it is be checked through combination of the encoder and decoder, respectively.

The check point is the BUFFER AMP output and two points of the MONITOR OUT. The encoder characteristics are checked at BUFFER OUT and the decoder characteristics are checked at MONITOR OUT

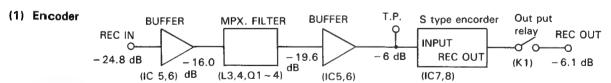


# Note: The O dB level when a 400 Hz sine wave signal is input is 775 mV.

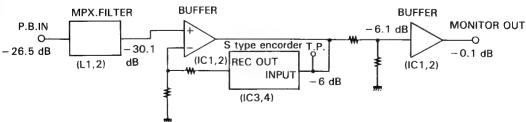
Input Level	Frequency (Hz)											
	20	50	100	200	400	500	1k	2k	5k	10k	15k	20k
d B												
+10	-7.2	-3.5	-2.4	-1.6	-1.2	- 1.2	-1.0	-1.1	-3.4	-6.2	- 7.5	-9.0
0	-6.5	-2.0	-0.1	0.1	0.0	0.0	0.0	-0.3	-2.4	- 5.2	-6.7	-8.4
- 10	-4.7	-0.6	3.0	3.4	2.8	2.7	2.4	1.8	-0.1	-2.1	-3.2	-4.5
-20	-1.4	2.0	6.2	7.8	7.4	7.2	6.6	5.9	4.1	2.9	2.1	0.8
-30	2.0	5.9	9.5	12.3	12.5	12.5	12.1	11.4	9.8	8.9	8.0	6.3
-40	2.5	7.4	10.9	15.0	16.9	17.1	17.2	16.6	15.4	14.7	13.2	10.1
<b>-50</b>	2.5	7.5	11.0	15.2	19.5	19.5	21.6	21.2	20.3	19.2	16.4	11.5
-60	2.5	7.5	11.0	15.2	19.8	19.8	23.3	23.5	22.8	21.5	17.4	11.6

Table 1 S-type NR encode characteristics.

#### (2) Block Diagram



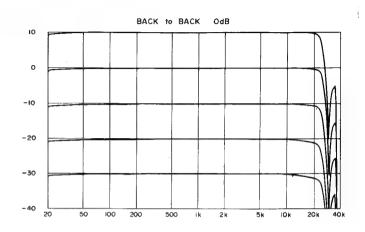
#### (2) Decoder

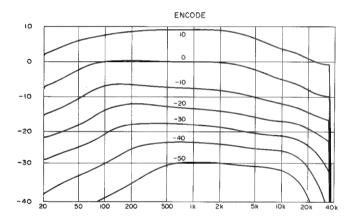


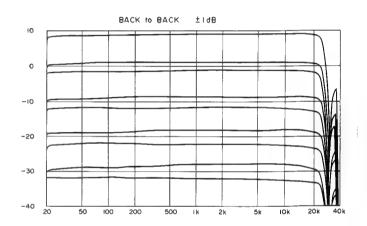
Note: The OdB level when a 400Hz sine wave signal is input is 775 mV.

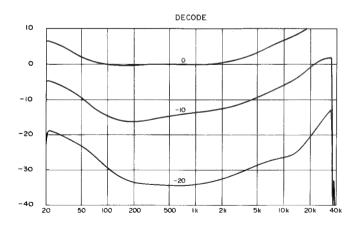
### **CIRCUIT DESCRIPTION**

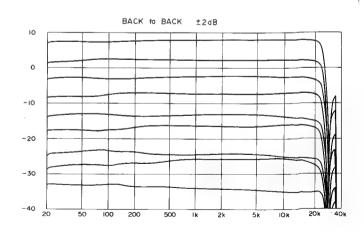
The appendix will include the encode characteristics, decode characteristics, and encode plus decode (back to back) graph. The back-to-back characteristics are represented in the graph as a reading of decoding by shifting the input level.





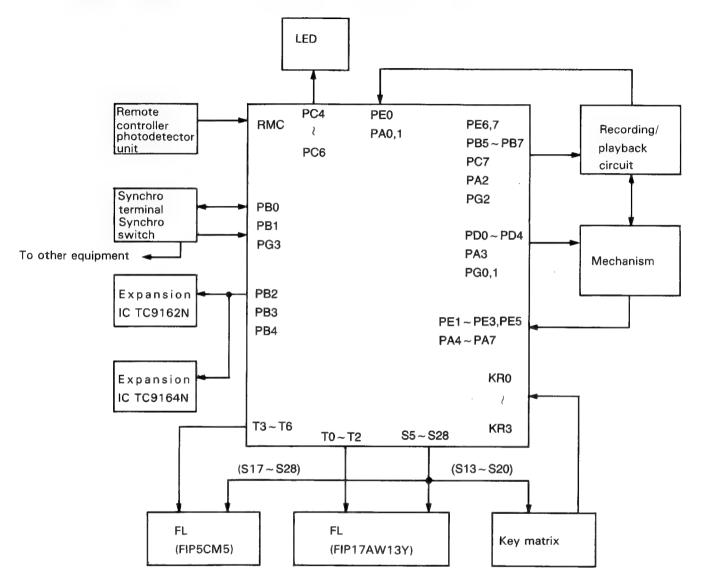






### **CIRCUIT DESCRIPTION**

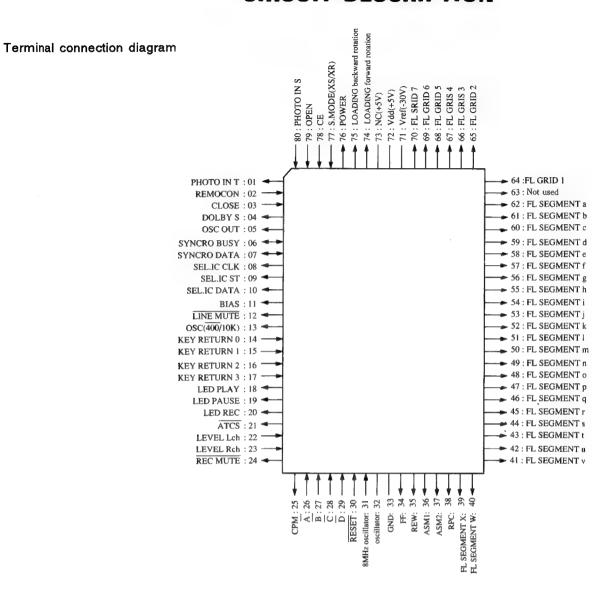
#### Microcomputer periphery block diagram



#### **KEY MATRIX**

KR0	KR1	KR2	KR3
	_	TEST 1	TEST2
DIRECT	CDPS	LOADING	INHFB
PRESET	DOLBY	C. RESET	METAL
ATCS	MPX	A ► B	CrO <sub>2</sub>
DOWN	•	I. SCAN	HALF
MONITOR	11	<b>&gt;</b>	DOLBY S
UP		<b>&gt;&gt;</b>	T. PLAY
DISPLAY	POWER	**	T. REC
	DIRECT PRESET ATCS DOWN MONITOR UP	DIRECT CDPS PRESET DOLBY ATCS MPX DOWN MONITOR UP	— — TEST 1  DIRECT CDPS LOADING  PRESET DOLBY C. RESET  ATCS MPX A ▶ B  DOWN ● I. SCAN  MONITOR II ▶  UP ■ ▶▶

### **CIRCUIT DESCRIPTION**



\*Ports 54 to 47 are also used as key scan 0 to 7.

#### Pin Description

Pin No.	Pin Name	1/0	Name	Description	
1	PE3/INT3	1	PHOTO IN T	Photosensor input (take-up side)	
2	PE4/REM	1	REMOCON	Remote control input	
3	PE5	1	CLOSE	Loading close detector switch input	
4	PE6	0	DOLBY S	Dolby S changeover output	
5	PE7/TO	0	OSC OUT	Square wave output terminal	
6	PBO/CINT	I/O	SBUSY	Serial BUSY input/output	
7	PB1/CS0	I/O	SDATA	Serial data input/output	
8	PB2/ SCKO	0	CLK	Clock output for selector IC	
9	PB3/SIO	0	ST	Strobe output for selector IC	
10	PB4/S00	0	DATA	Data output for selector IC	
11	PB5/SCK1	0	BIAS	Bias ON/OFF control	H: 0N
12	PB6/SI1	0	LINE MUTE	Line mute control	L: 0N
13	PB7/SO1	0	OSC FILTER	400 /10K filter switching	
14~17	KR0~3	ı	KR0~3	Key return signal input	
18	PC4/KR4	0	LED PLAY	Play LED driving port	
19	PC5/KR5	0	LED PAUSE	Pause LED driving port	
20	PC6/KR6	0	LED REC	Rec LED driving port	

# **CIRCUIT DESCRIPTION**

Pin Description

Pin No.	Pin Name	1/0	Name	Description
21	PC7/KR7	0	ATCS	ATCS NORMAL/ OSC switching
22	PAO/ANO	1	LEVEL Lch	Lch level input
23	PA1/AN1		LEVEL Rch	Rch level input
24	PA2/AN2	0	REC MUTE	Rec Mute control L: ON
25	PA3/AN3	0	CPM	Capstan motor ON/OFF control
26	PA4/AN4		Α	Mechanism position detector encoder A
27	PA5/AN5		В	Mechanism position detector encoder B
28	PA6/AN6	1	С	Mechanism position detector encoder C
29	PA7/AN7	- 1	D	Mechanism position detector encoder D
30	RST	1	RESET	Reset signal input L: RESET
31	EXTAL	1		Clock oscillator connection terminal
32	XTAL			Clock oscillator connection terminal
33	Vss			GND terminal
34	PD0/S0	0	FF	Reel motor control
35	PD1/S1	0	REW	Reel motor control
36	PD2/S2	0	ASM1	Assist motor control 1
37	PD3/S3	0	ASM2	Assist motor control 2
38	PD4/S4	0	RPC	Reel speed control H: Normal
39	PD5/S5	0	х	FL segment
40	PD6/S6	0	w	FL segment
41	PD7/S7	0	v	FL segment
42	PF0/S8	0	υ	FL segment
43	PF1/S9	0	t	FL segment
44	PF2/S10	0	s	FL segment
45	PF3/S11	0	r	FL segment
46	PF4/S12	0	q	FL segment
47	PF5/S13	0	р	FL segment key scan signal output 7
48	PF6/S14	0	. 0	FL segment key scan signal output 6
49	PF7/S15	0	n	FL segment key scan signal output 5
50	S16	0	m	FL segment key scan signal output 4
51	S17	0	1	FL segment key scan signal output 3
52	S18	0	k	FL segment key scan signal output 2
53	S19	0	i	FL segment key scan signal output 1
54	S20	0	i	FL segment key scan signal output 0
55	T15/S21	0	h	FL segment
56	T14/S22	0	g	FL segment
57	T13/S23	0	f	FL segment
58	T12/S24	0	е	FL segment
59	T11/S25	0	d	FL segment
60	T10/S26	0	С	FL segment
61	T9/S27	0	b	FL segment
62	T8/S28	0	а	FL segment
63	T7	0		not used
64	Т6	0	1G	FL grid
65	T5	0	2G	FL grid
66	T4	0	3G	FL grid
67	T3	0	4G	FL grid
68	T2	0	5G	FL grid
69	T1	0	6G	FL grid
70	то	0	7G	FL grid
71	V FDP	+ -		
72	V DD	+		Voltage supply terminal for FL
73	NC NC	+		Positive power supply terminal
		1	Engueral retetion	David Ladia familia de la companya d
74	PG0	0	Forward rotation	Power loading forward rotation control
75	PG1	0	Backward rotation	Power loading backward rotation control
76	PG2	0	POWER	Power ON/OFF control
77	PG3	. 1	S. MODE	Synchro mode (XS/ XR ) discrimination
78	PEO/INTO	1	CE	Backup detection terminal
79	PE1/INT1	1	OPEN	Loading open detector switch input
80	PE2/IN2		PHOTO IN S	Photosensor input (supply side)

### **CIRCUIT DESCRIPTION**

#### Operating specifications

#### **Function description**

- (1) Features
- 1 Amorphous 3 head closed loop dual capstan
- ② Direct drive capstan/reel/actuator motor
- ③ A.T.C.S (AUTO TAPE CALIBRATION SYSTEM) Fine adjustment
- 4 Power loading
- (5) D.P.S.S
- 6 CD direct
- Tequipped with Dolby B.C.S (S available only in KX-9050S)
- 8 Full cassette stabilizer
- 9 Dual FL display
- 10 High bias system
- ① Center mechanism layout
- (2) Objects of control
- ① Cassette mechanism : D40-0992-15 (KX-9050)

:D40-1224-15 (KX-9050S)

2 Loading mechanism :D-40-0996-05

3 IC

:TC9162N, TC9164N

4 Display

:FL. LED

- 5 Recording/playback circuit unit
- 1.2 Specifications, depending on model Diode switch provided/not provided (KSO-KR1)... Dolby S provided/not provided.

#### Operating Specifications

1) ATCS (AUTO TAPE CALIBRATION SYSTEM) Carries out automatic adjustment of the bias value (10 KHz, 16 adjustable steps) and level value (400 Hz, 16 adjustable steps).

#### a: Bias Adjustment

400 Hz and 10 KHz are generated alternately after forwarding the reader tape in blank (approximately 10 seconds), and their levels are monitored. The bias value is changed while doing so, and the value at which 400 Hz ≤ 10 KHz is regarded as the optimum bias value.

#### b: Level Adjustment

After finishing the bias adjustment, the level obtained when entering the 400 Hz signal without passing through the head is stored in advance in the memory (reference). Next, 400 Hz signal is generated by the oscillator, and the Rch level is monitored. The level value is changed while doing so, and the value in which reference ≤ Rch is regarded as the optimum level value.

Bias Fine Adjustment (BIAS CONTROL)

Fine adjustment is available only after ATCS presetting (when ATCS lamp is ON) (Irrespective of mechanism operation). The variable range is up to  $\pm 3$  steps. No variation is available, however, when the said steps exceed the 16-step variable range (the bar of the rightmost side flickers). There is no variation when the key is kept merely pressed.

#### d: Preset

The bias value and the level value preset by ATCS can be stored in the memory. The bias value and the level value are stored in the memory when the PRESET key is pressed after presetting the ATCS. There are 3 types of memory, chrome, normal and metal. The memory is recalled when the PRESET key is pressed while the ATCS lamp is lit, and the function is reset when the key is presed again.

ATCS is preset by carrying out the steps a. and b. above. When either a. or b. can not be preset due to malfunction of the tape and other reasons, reset the ATCS mode, and return the bias value and the level value to the initial state.

#### 2 Power loading (OPEN/CLOSE)

In the basic operation the power loading motor is rotated for a given time (forward rotation) when the OPEN/CLOSE key is pressed once. When it is pressed again, the motor is rotated for a given time (backward rotation), and the door is closed. When the door is fully closed, the switch recognizing its closure (CLOSE SW) is turned ON. There are the following kinds of special operation.

- a: If a basic operation key (PLAY, FF, REW, REC, PAUSE, STOP) is pressed while the door is opening, the door is closed, and then the operation corresponding to the key is question is started. (The door is merely closed when there is no cassette in the drive. It opens again, however, when REC or REC PAUSE is pressed).
- b: OPEN/CLOSE operation is possible also when POWER is OFF. (When AC is ON), If POWER is turned ON or OFF when the door is open, it is all osed.
- c: If the OPEN/CLOSE key is pressed with the mechanism in operation, the operation of the mechanism is stopped, and then the door is opened.
- d: If the door is touched gently with the hand while it is opening, the motor is rotated for a giver time

### CIRCUIT DESCRIPTION

when the OPEN recognition switch is turned OFF, and the door is closed. The same operation is carried out also when the door is pushed forth.

- e: If the door is held in place with the hand when it is about to be opened, the motor is rotated for a given time, and after that the motor is stopped. The door is opened by inertia when the hand is released.
- f: The same operation as e. is carried out when the door is caught by something or stopped by hand while it is opening (when both recognition switches are OFF).

The door opens when it is caught by something or held by hand while it is closing (when both recognition switches are OFF).

#### 3 CD direct

The CD can be recorded without passing through the volume. ON/OFF is possible also during the recording. If CD DIRECT is turned ON, MPX is turned forcibly OFF, and the MPX key is inhibited while CD DIRECT is ON. MPX is returned to its previous state when CD DIRECT is turned OFF.

4 Counter

Linear counter. The counter value is backed up when the power is turned OFF.

Start shift diagram

#### (1) Auto stop

The signal of the photoreflector located behind the reel stand is read, and when a given state (H or L) is kept 1 or 2 more seconds during PLAY, REC, FFD, RWD, CUE or RVW, the situation is interpreted as tape end, and the operation shown in the table below are carried.

	operation mode	state				
	PLAY	STOP				
atio	FFD	STOP				
normal operation	RWD	STOP				
0 2	REC	STOP				
D	One-trac repeat , auto rec					
	mute, re-rec standby	STOP				
Р	Rewindplay During RWD: FF se					
i .	FF search, RWD search,	STOP				
s	INDEX SCAN					
	Dash & play					
s	PLAY & CUE	RWD				
	RWD	1st to 15th time : CUE				
		16th time : STOP				
	ATCS	STOP				

#### State shift of circuit system

	T					
state	During ATCS	ATCS presetting	CD DIRECT	CD DIRECT	CDPS	
Item	presetting	finished	ON	OFF		
	During reference :					
TAPE/SOURCE	SOURCE	TAPE	No change	SOURCE	SOURCE	
	Others : TAPE	·				
MPX	No change	No change	OFF	Return to previ-	No change	
				ous state		
DIRECT MODE	No change	No change	ON	OFF	No change	
DO ON/OFF	OFF	Return to previ-	No change	No change	No change	
		ous state			_	
0 <b>0</b> B/C	В	Return to previous state	No change	No change	No change	
DXO S	ON	Return to previous state	No change	No change	No change	
DOLBY S	OFF	Return to previous state	No change	No change	No change	
LINE	No change	No change	OFF	ON	No change	
DIRECT	No change	No change	ON	OFF	No change	

### **CIRCUIT DESCRIPTION**

#### **TEST MODE**

#### (1) Initial states

Item	State
POWER	OFF
DOLBY	OFF
CE DIRECT	OFF
AUTO MONITOR	TAPE
MPX FILTER	OFF

#### Backup data

- ① POWER
- (2) DOLBY
- ③ CD DIRECT
- (4) AUTO MONITOR
- (5) MPX FILTER
- 6 PRESET
- 7 ATCS data (NORMAL CrO2, METAL)
- (8) Linear counter

#### **SELECT IC Data**

-	TC9164	N (IC51)		TC9162N (	IC52)
Item	State	Item	State	Item	State
CrO2 L	OFF	BIAS1	ON	LEVEL1	ON
NOR L	OFF	BIAS2	ON	LEVEL2	ON
CrO2 R	OFF	BIAS3	ON	LEVEL3	ON
NOR R	OFF	BIAS4	ON	LEVEL4	OFF
TAPE/	ON	MPX	OFF	LINE	ON
SOURCE					
CROM	OFF	DIRECT MODE	OFF	DIRECT	OFF
METAL	ON	ON/ OFF	OFF	DCO S	ON
METAL	OFF	OXO B/C	ON	_	_

#### (2) Test mode

Presetting method: TEST1 KS0 (j) → KR2

TEST2 KSO (j) → KR3

The operation mode is switched to the test mode by short-circuiting the 2 terminals mentioned above with a diode, and by turning the power ON.

Resetting method: The test mode is reset by pressing the PAUSE key. The contents of the test mode are not backed up.

#### (a) Specifications common to both TEST 1 and 2

1 All display ON

The display turns ON approximately 500ms after turning the power ON, and remains ON for approximately 1.5 second.

The keys are enabled by resetting the ALL DISPLAY ON state.

#### ② Mechanism SW display

The states of the various mechanism SW are displayed on the level meter section when LINE MUTE is ON.

CrO2,

METAL,

F.REC INH

+ 3dB

+ 7dB

+12dB

#### 3 Direct change

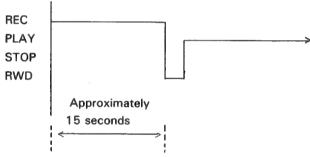
The operation mode goes to the direct REC state also from the PLAY state.

#### (4) Timer PLAY

The operation mode switches to PLAY within the shortest time (approximately 2 seconds) when the timer SW is set to PLAY.

#### 5 Timer REC

When the timer SW is set to REC, automatic recording and playback can be carried out in conformity with the time chart shown below.



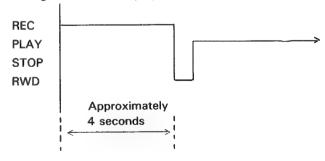
#### 6 CDPS

When the CDPS key is entered, the "CCRS start" serial code is emitted, and after that the operation mode is switched to REC PAUSE.

#### (b)TEST1 specification

#### 1 4-second REC

When the REC key is pressed, recording is carried out for 4 seconds, the tape is rewound down to its beginning, and then it is played back.



### **CIRCUIT DESCRIPTION**

#### ② ATCS

The ATCS presetting time is shortened (Approximately 20 seconds → Approximately 10 seconds).

③ PRESET

Storage of the bias and level vales, and shortening of recalling time.

#### (c) TEST2 specifications

#### 1 ATCS

The operation mode is switched to the recording state, and the input is switched to the internal oscillator side. Then, 400Hz is generated for 0.4 second, and 10KHz is generated for 0.6 second. Simultaneously, the bias terminals (4) are changed by 4 steps at 0.2 second intervals. After that, the level terminals (4) are changed in 4 steps at 0.2 second intervals. After finishing the said operations, the operation is returned to the original line input, and the bias and level are returned to their initial values. The recording operation is continued.

② MPX filter MPX filter is ON only when MPX key is ON. It is OFF at all other times.

3 Dolby

DOLBY B when FFD key is ON.
DOLBY C when RWD Key is ON.
DOLBY S when I. SCAN key is ON.

### **CIRCUIT DESCRIPTION**

A, B, C, D: Cam switch

Bias oscillation H: ON L: OFF

MONITOR: Automatic monitor control H: TAPE L:

Line mute control H: OFF L: ON

R. MUTE: Rec mute control H: OFF L: ON

SOURCE

BIAS:

L.MUTE:

#### **Timing chart**

Mechanism timing chart

The control method consists of rotating the cam gear of the center of the mechanism by means of the assist motor, detecting the current cam mode by means of the 4-bit rotary switch code mounted on the cam gear, and moving to the desired position. The timing is shown below.

CMP:

Capstan motor control L: ON H: OFF

R.FFD:

Reel motor control (forward side)

R.RWD:

Reel motor control (return side)

ASM1:

Assist motor control 1

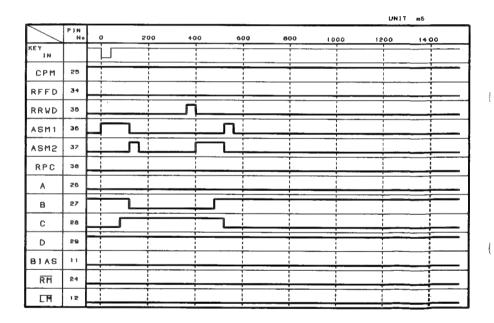
ASM2:

Assist motor control 2

RPC:

Reel motor speed control H: LOW L: HIGH

When POWER ON
When tape is loaded
(24ms rewinding to eliminate tape slackness)



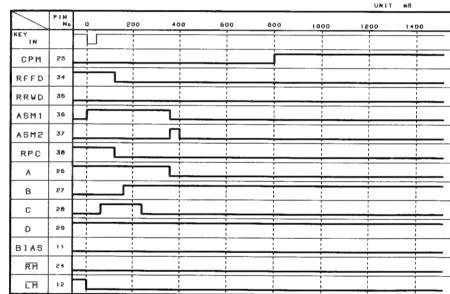
UNIT

### **CIRCUIT DESCRIPTION**

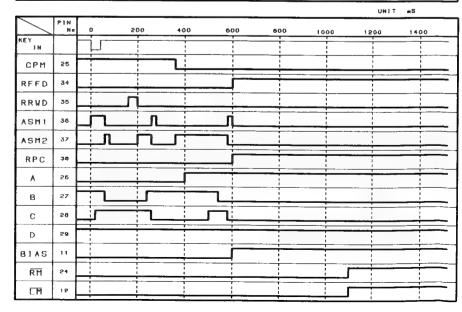
TIMING CHART STOP TO PLAY

1000 CPM RFFD RRWD ASMI 37 ASM2 RPC 26 Α 27 В 59 С 1.1 BIAS RMLM 12

PLAY TO STOP

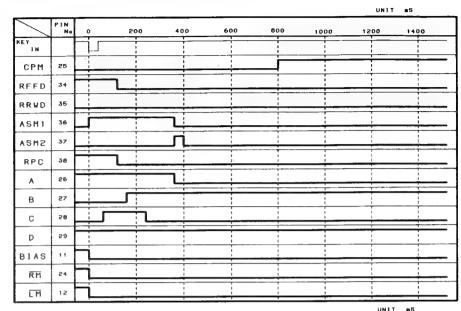


STOP TO REC

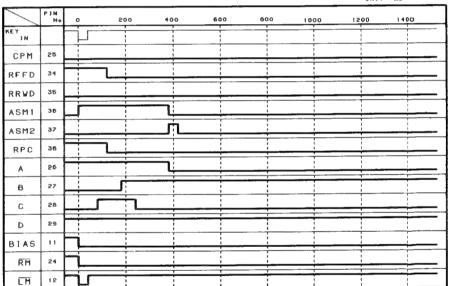


### **CIRCUIT DESCRIPTION**

**REC TO STOP** 



REC to REC PAUSE



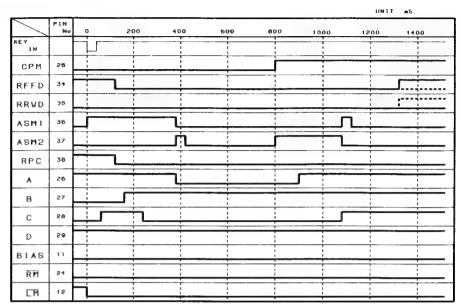
STOP TO FF/RWD (---)

	P I N No	o	200	4 (	00
KEY IN					
СРМ	25				1
RFFD	34				
RRWD	35			!	
ASMI	36	5	1		
ASM2	37				
RPC	38				-
Α	26				
В	27		<u> </u>		
С	28	4			-
D	29				
BIAS	11				<u> </u>
RM	24		<u> </u>	1	i
LM	12				

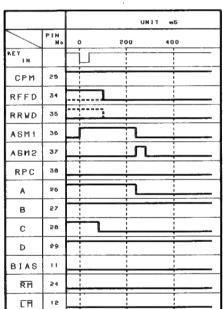
FF/RWD TO STOP 25 CPM RFFD 34 35 RRWD 36 ASM1 37 ASM2 RPC 38 26 27 28 29 1.1

### **CIRCUIT DESCRIPTION**

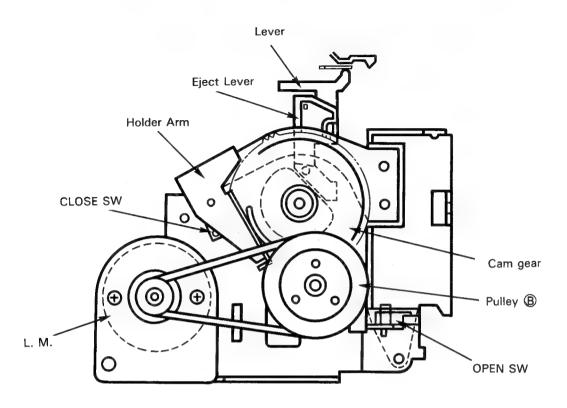
PLAY TO CUE/RVW (---)



CUE/RVW TO STOP



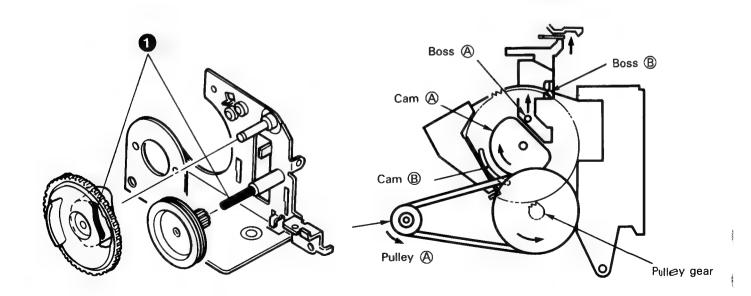
### **MECHANISM DESCRIPTION**



- → POINT WHICH SHOULD BE GREASED Dow corning wo5-0130-00
- 1 Section

#### **OPENING THE HOLDER**

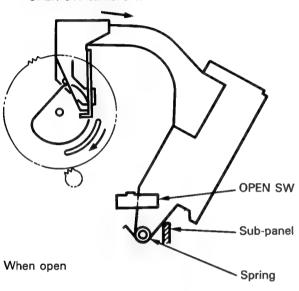
- 1) Push the OPEN/CLOSE switch.
- ② The LM starts rotating.
- 3 The cam gear starts rotating via pulley.
- 4 The cam of the cam gear is released from the tongue of the holder arm.
- (5) Since the boss (A) of eject lever is pushed up at the same time, the boss (B) of INTER LOCK LEVER is also pushed up, and the tape SW is flicked up.



### **MECHANISM DESCRIPTION**

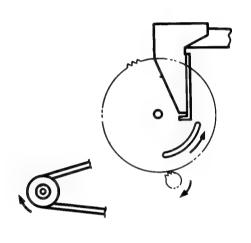
When the cam B of the cam gear separates from the holder tongue, the holder begins to be opened by the spring, and stops at the position where it touches the sub-panel.

At that time the CLOSE switch turns OFF, and the OPEN SW turns ON.



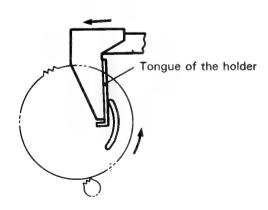
#### **CLOSING THE HOLDER**

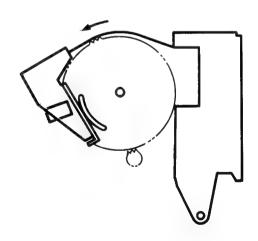
- 1) Push the OPEN/CLOSE switch.
- ② The LM starts rotating, and as a consequence the cam gear starts rotating.



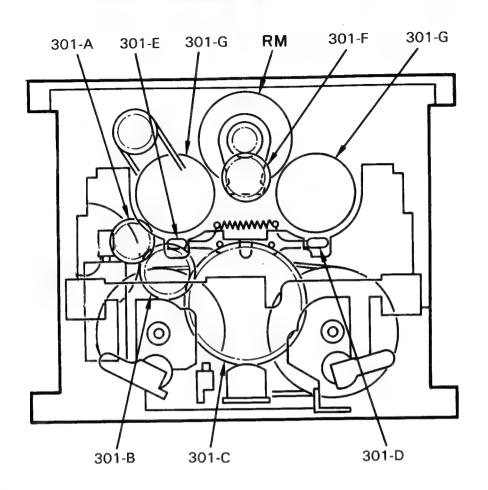
- 3 The cam 

  B of the cam gear touches the tongue of the holder, and the holder is pushed to the arrow direction.
- The cam gear continues to rotate, and when it reaches the position shown in the figure the CLOSE switch turns ON. The rotation stops and the holder is closed.





### **MECHANISM DESCRIPTION**



#### Mechanism specification

Use of parts

MM T42-0560-08 DC MOTOR ASSY (CAPSTAN)

RM T42-0612-08 Reel motor

AM T42-0593-08 DC MOTOR ASSY

BM D16-0335-08 Main belt BR D16-0325-08 Reel belt

301: A10-2982-08 Chassis assy

301- A Gear

301- B Gear

301- C Cam gear

301- D Brake lever (L)

301- E Brake lever (R)

301- F Idler gear

301- G Reel stand

PLAY Torque: 35 ~55 g·cm FF/RWD Torque: 70 ~160 g·cm Back Tension Torque: 2 ~5 g·cm

### **MECHANISM DESCRIPTION**

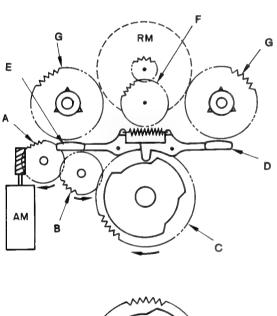
#### **Description of Operation**

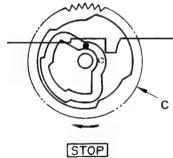
#### Playback/Record

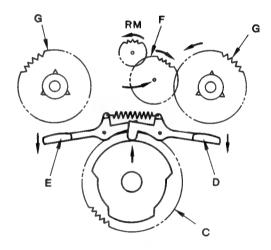
- 1. The assist motor runs.
- 2. Relay gears A and B turn the cam gear in the direction of the arrow, raising the boss on the head chassis. The pinch roller is pressed against the capstan.
- 3. In the PLAY position, the reel brake is released by the cam on the cam gear.
- 4. The reel motor runs in the direction of the arrow, and the idler gear starts turning the takeup reel in the direction of the arrow to start playback/recording.

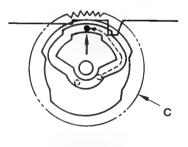
#### Playback/Record → STOP

The assist motor runs, and the operations up to play-back/rocord are reversed.







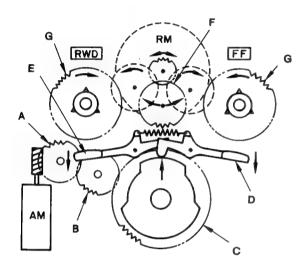


PLAY/REC

### **MECHANISM DESCRIPTION**

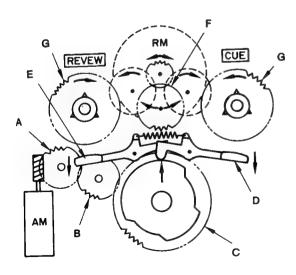
#### Fast forward Rewind

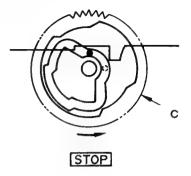
- The assist motor rotates the cam gear, and the brake assembly is disengaged from the takeup and supply reels.
   The head chassis is not lifted, and the pinch roller and head do not contact the tape.
- 2. The reel motor starts running in the fast forward or rewind directions to wind the tape forward or in reverse.

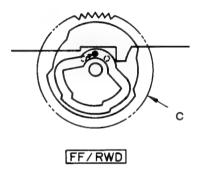


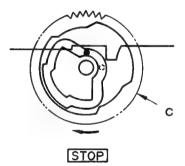


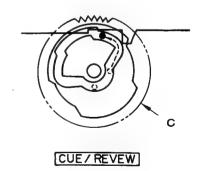
- The assist motor runs, the cam gear turns, and the head chassis is raised. The pinch roller is also raised, but is not pressed against the capstan. The head contacts the tape.
- The reel motor runs in the cue and revew directions. When the motor runs in the cue direction, the takeup reel is turned by the idler gear; when the motor runs in the revew direction, the supply reel turns to wind the tape.









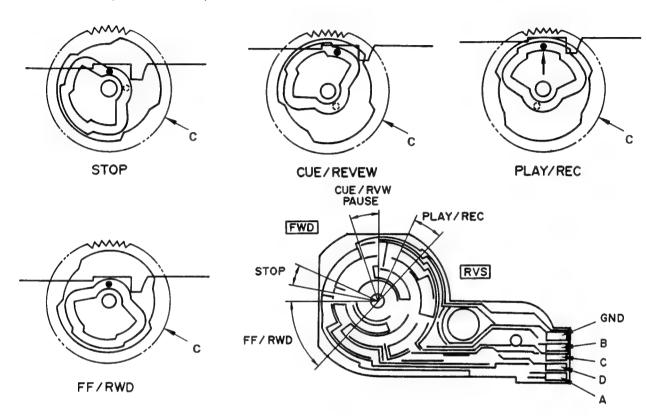


### **MECHANISM DESCRIPTION**

#### **Rotary switch operation**

The operation of the mechanism is determined by the position of the rotary switch on the cam gear. Data on rotary switches A to D is input to the micropocessor to control

the assist motor, turn the cam gear, and control the head position and the brake assembly.



#### Rotary switch cam flow

Direct	ion				RVS (unused	1)			FWD						
Мо	de	PLAY		PAUSE CUE REV		STOP		FF/RWD	FF/RWD		STOP		PAUSE CUE REV		PLA
Cam	angle	20°	24°	18°	46°	14.5°	11°	46.5°	46.3°	11°	14.5°	46°	18°	24°	20
Rotary switch	AH BH CH DH								H H				(E) (E) (E)		(H)
Head base position (approxi- mate)	PLAY PAUSE STOP														

### **ADJUSTMENT**

#### RECORD/PLAYBACK UNIT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	CASSTTE TAPE DECK SETTINGS	ALIGNMENT POINTS	ALING FOR	FIG
C.	ASSETTE DECK SECTION	TAPE : NORMAL,	DOLBY : OFF, INPUT : L	INE		0dBs=0.7	75V
[1]	BIAS OSCILLATING FREQUENCY	Load the non recorded tapes on Deck	Connect the frequency counter between TP5 and GND or TP6 and GND	REC	L33 (X26-129 B/2)	Adjust so that the frequency counter shows 210kHz.	
[2]	BIAS LEAK	Load the non recorded tape on Deck	Connect the AC VOLT METER between TP5 and TP6.	Load a metal tape.	L 23 (L) L 24 (R) (X26-129 B/2)	Minimum	
[3]	HX VCA	Load the non recorded tape on Deck	Connect the oscilloscope between TP3 and TP4	REC	L 31 (L) L 32 (R) (X26-129 B/2)	Minimum	
		MTT-150 400Hz (200nWb)				Output level : -1.2dBs	
[4]	PLAYBACK LEVEL (1)	MTT-256,SCC-1727 315Hz (160nWb)	(B)	(DOLBY OFF : 9050) (DOLBY S : 9050S) PLAY	VR 1 (L) VR 2 (R) (X26-129 A/2)	Output level : -4.0dBs	
		MTT-256U,TCC-160 315Hz (250nWb)			(**************************************	Output level : 0 dBs	
	PLAYBACK LEVEL (2) (KX-9050S)	MTT-150 400Hz		PLAY	VD 5 (L)	Output level : -1.2dBs	
[5]		MTT-256,TCC-1727 315Hz	(B)		VR 5 (L) VR 6 (R) (X26-129 A/2)	Output level : -4.0dBs	
		MTT-256U,TCC-160 315Hz			,	Output level : 0 dBs	
[6]	PLAY TRIM CONTROL	MTT-114 TCC-153,TCC-1727 -10dB, 10kHz	(B)	PLAY	VR 3 (L) VR 4 (R) (X26-129 A/2)	Adjust the variable resistors so that the level of 10kHz is -10 dBs	
[7]	BIAS CRRENT	(A) 1kHz, -30dBs 10kHz, -30dBs	(B)	Adjust REC VR (LEVEL, BALANCE) so that the REC monitor output becomes -24dBs at 1 kHz, then record and reproduce signal of 1 kHz and 10kHz in alternation.	VR 31 (L) VR 32 (R) (X26-129 B/2)	Adjust the bias current adjusting VR so that the playback level of the 10kHz signal is +0.5dB higher than that of the 1kHz signal when recording a 1kHz signal and a 10kHz signal alternately.	
[8]	RECORD LEVEL	(A) 1kHz, -30dBs	(B)	Record and reproduce a 1kHz signal under the conditions set in <7>	VR 21 (L) VR 22 (R) (X26-129 B/2)	Adjust the variable resistors so that a playback level of -24dBs is obtained.	
[9]	FL PEAK LEVEL METER	(A) 1kHz, -10dBs	· –	REC PAUSE Adjust REC VR (LEVEL.BALANCE) so that the monitor output is -4dBs at 1kHz.	VR 95(R) (X25-471 A/8)	Adjust to the same level as that to L-channel.	

Note: On Item (4) &(5).

Although 3 kinds of tapes are set forth for the playback level adjustment, the use of one tape suffices for adjustment. Here is meant no necessity for the use of sll these 3 kinds of tapes. Other than above mentioned tapes, when a test tape equal in magnetic flux and frequency is available, the adjustment is feasible with this test tape by making the playback output suited to the specified output level of this tape in agreement with the adjustment method.

# **ADJUSTMENT**

#### **MECHANISM**

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	CASSETTE TAPE DECK SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
CAS	SSETTE DECK SECTION	TAPE: NORMAL, [	OOLBY : OFF, INPU	T: LINE		0dBs=0	.775V
i F	REC/PLAY HEAD				· ·		
[1]	DEMAGNETIZATION	_	_	POWER : OFF Remove the cassette door.	REC/PLAY head	Demagnetige the REC/PLAY head with a head demagnetizer.	
[2]	CLEANING	_	_		REC/PLAY head erase head capstan. pinch roller.	Clean the REC/PLAY head erase head, capstan and pinch roller, using a cotton swab slightly damped with alcohol.	
[3]	Verification of the rec/play head. (KX-9050S)	* MTT-94201	_	FLAY	_	Check that the level difference between the left and right channels is within 4 dB.  If the difference exceeds 4 dB, perform the adjustments descrived in (7).	
[4]	Azimuth	MTT-114 TCC-153 SCC-1727 10kHz, -10dB	_	PLAY	Aimuth adjustment screw	Adjust the output to the maximum, then set the azimuth screw so that the oscilloscope resurge wavelength approaches a 45 deg. linearity.	
[5]	Check with mirror tape	mirror tape	-	PLAY	_	Play back the mirror tape and check that the edges of the tape do not touch the tape guide.  If they do, perform the adjustments descrived in (7) onward.	
[6]	TAPE SPEED	(A) MTT-111 TCC-110 , SCC-1727 3kHz, -4dB		PLAY	Trimming potentiometer in the DC motor	Adjust the tape speed so that a 3kHz signal is produced at the center of the tape.	
[7]	Height of supply pinch arm	THG-801	_	PLAY	Supply pinch roller arm height adjustment screw	Mount the standard THG-801 plate on the cassete receiving plate, then turn the block gage sideways and adjust the screws so that the gage fits in the tape guide.	
[8]	Height of REC/PLAY head	THG-801	-	PLAY	Head height adjustment screw	Mount the standard THG-801 plate on the cassete receiving plate, then turn the block gage sideways and adjust the screws so that the gage fits in the tape guide.	

### **ADJUSTMENT**

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	CASSETTE TAPE DECK SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
CA	ASSETTE DECK SECTION	TAPE: NORMAL,	DOLBY : OFF, INPUT	: LINE		<b>0dBs=</b> 0.775∨	′
[9]	rec/play head adjustment	THG-801	_	PLAY	Head tilt adjustment screw	Turn the THG-801 · block gage sideways and position it so that it is perpendicular to the head surface. Adjust screw B so that the gage and standard plate come into close contact.	
	e head height can be altere repeat adjustment procedu	• 1	-	e (9),			
	DEMAGNETIZATION	_	_	POWER : OFF Remove the cassette door.	REC/PLAY head	Demagnetize the REC/PLAY head with a head demagnetizer.	
E103	CLEANING	_	_	_	REC/PLAY head erase head, capstan, pinch roller.	Clean the REC/PLAY head erase head,capstan and pinch roller using a cotton swab slightly damped with alcohol.	
[11]	Azimuth	SCC-1727 MTT-111 TCC-110 3kHz, -4dB	_	PLAY	Azimuth adjustment screw	Adjust the output to maximum for the 3 kHz output then set the azimuth screw C so that the oscilloscope resurge wavelength approaches a 45 deg. linearity.	
Cł	neck the adjustments in proc	edures (8), (9) and (1	1).				
[12]	Check with mirror tape	mirror tape	_	FLAY	_	Playback the mirror tape and check that the tape edges are not touching the tape guide.  If they are?, repeat procedures (8), (9) and (11) to adjust.	

Returne to procedure (3). (KX-9050S)

### **REGLAGE**

#### UNITE D'ENREGISTREMENT/LECTURE

N.	ITEM	REGLAGES DE L'ENTREE	REGLAGES DE LA SORTIE	REGLAGES DU MAGNETOPHONE A CASSETTE	POINTS DE L'ALIGNEMENT	ALIGNER POUR	⊦ıG.
SECT	TION MAGNETOPHO	NE A CASSETTE	BANDE : NOMAL, DOLBY	: OFF, INPUT : LINE		0 dBs=0,775	V
[1]	FREQUENCEN OSCILLANTE DE POLARISATION	charger les bandes non enregistrées dans la platine	Connecter le fréquencemètre entre TP5 et GND ou TP6 et GND.	REC	L33 (X26-129 B/2)	Ajuster de sorte que le frequencemètre indique 210 kHz.	
[2]	FUITE DE POLARISATION	charger une bande non enregistrée dans la platine	Connecter le voltmètre de CCentre TP5 et TP6.	charger une bande Metal	L23 (G) L24 (D) (X26-129 B/2)	Minimum	
[3]	HX VCA	charger une bande non enregistrée dans la platine	Connecter un oscilloscope entre TP3 et TP4	REC	L31 (G) L32 (D) (X26-129 B/2)	Minimum	
		MTT-150 400Hz (200 nwb)		(DOLBY OFF: 9050) (DOLBY S: 9050S) PLAY	VR 1 (G)	Niveau de sortie : -1,2 dBs	
[4]	NIVEAU DE LECTURE (1)	MTT-256,SCC-1727 315 Hz (160 nwb)	(B)		VR 2 (D) (X26-129 A/2)	Niveau de sortie : -4,0 dBs	
		MTT-256U, TCC-160 315 Hz (250 nwb)				Niveau de sortie : 0 dBs	
	NIVEAU DE LECTURE (2) (KX-9050S)	MTT-150 400 Hz			VR 5 (G)	Niveau de sortie : -1,2 dBs	
[5]		SCC-1727 MTT-256, TCC-160	(B)	PLÁY	VR 8 (D) (X26-129 A/2)	Niveau de sortie : -4,0 dBs	
	315 Hz				Niveau de sortie : 0 dBs		
[6]	CONTROLE D'EQUILIBRE DE LECTURE	MTT-114,SCC-1727 TCC-153 -10 dB, 10kHz	(B)	PLAY	VR 3 (G) VR 4 (D) (X26-129 A/2)	Ajuster les résistances variables de sorte que le niveau 10 kHz soit -10 dBs	
[7]	COURANT DE POLARISATION	(A) 1 kHz, -30 dBs 10 kHz, -30 dBs	(B)	Ajuster la VR REC (LEVEL, BALANCE) pour que la sortie de contrôle REC deviennent -24 dBs à 1 kHz, puis enregistrer et reproduire un signal de 1 kHz et 10kHz alternativement.	VR 31 (G) VR 32 (D) (X26-129 B/2)	Ajuster le courant de polaristion en ajustant VR de sorte qur le niveau de lecture soit +0,5 dB plus haut que celui 10 kHz lors de l'enregistrement alternativement d'un signal de 1 kHz et d'un signal de 10 kHz.	
[8]	NIVEAU D'ENREGISTRE- MENT	(A) 1 kHz, -30 dBs	(B)	Enregistrer et reproduire un signal de 1 kHz dans les conditions établies en < 7 >	VR 21 (G) VR 22 (D) (X26-129 B/2)	Ajuster les résistances variables de sorte le niveau de lecture de -24 dBs soit obtenu.	
[9]	INDICATEUR DE NIVEAU DE CRETE FL	(A) 1 kHz, -10 dBs	-	REC PAUSE Ajuster la VR REC (LEVEL, BALANCE) pour que la sortie de contrôle soit -4dBs à 1 kHz.	VR 95(D) (X25-471 A/8)	Ajuster au même niveau que celui du canal G	

REMARQUE: Sur les items (4) et (5)

Bien que 3 sortes de bande soient employées pour l'ajustement du niveau de lecture, l'utilisation d'une bande suffit pour l'ajustement. Cela signifie qu'il n'est pas nécessaire d'utiliser les 3 types de bande. En plus des bandes citées ci-dessus, quand une bande test de flux magnétique et frequence egaux est disponible, l'ajustement est possible en réglant la sortie de lecture sur le niveau de sortie specifique à cette bande, selon la methode d'ajustement.

# REGLAGE

#### **MECHANISM**

N.	ITEM	REGLAGES DE L'EHTREE	REGLAGES DE LA SORTIE	REGLAGES DU MAGNETOPHONE A CASSETTE	POINTS DE L'ALIGNEMENT	ALIGNER POUR	FIG.
	SECTION MAGNETOPHO	ONE A CASSETTE	BANDE : NORMAL, D	OOLBY: OFF, INPUT: LI	NE	0dBz=0,775	V
	TETE D'ENREGISTRE	MENT/LECTURE					
[1]	DEMAGNETISATION		_	ALIMENTATION: COUPEE Retirer la porte de cassette.	Tête d'enregistrement/ lecture	Démagnétiser la îete d'enregistrement/lecture avec l'effaceur de tête.	
[2]	NETTOYAGE	_	_	_	Tête d'enregistre- ment/lecture, tête d'effacement, cabestan, galet presseur	Nettoyer la fête d'enregistrement/lecture, la fête d'effacement, le cabestan et le galet presseur avec un coton-tige legerement trempe dans de l'alcool.	
[3]	Vérification de la tête d'enre- gistrement/lecture (KX-9050S)	<b>* MT</b> T-94201		PLAY	_	Vérifier que la difference de niveau entre les canaux droits et gauche soit inférieure à 4 dB. si la différence dépasse 4 dB,effectuer les ajustements décrits en (7).	
[4]	Azimut	SCC-1727 MTT-114 TCC-153 10kHz,-10dB		PLAY	Vis d'ajustement de l'azimut C	Ajuster la sortie du maximum, puis régier la vis d'azimut de sorte que la longueur d'onde sur l'oscilloscope approche d'une linéarité de 45 deg.	
[5]	Vérifier avec une bande miroir	Bande miroir	_	PLAY		Reproduire la bande miroir et vérifier que les rebords de bande ne touchent pas le quide de bande.  En cas de contact, effectuer les ajustements décrits en (7) plus loin.	
[6]	Verifier avec une bande miroir	Bande miroir		PLAY	Potentiomètre d'équilibrage dans le moteur CC	Ajuster la vitesse de la bande pour qu'un signal de 3kHz soit produit au centre de la bande.	
[7]	VITESSE DE LA BANDE	(A) SCC-1727 MTT-111, TCC-110 3kHz, -4dB	-	PLAY	Vis de reglage de hauteur de bras de galet presseur d'alimentation	Monter la plaque THG-80 1 standard sur la plaque de réception de cassette, puis tourner le calibre latéralement et ajuster les vis de sorte que le calibre correspond au guide de bande.	
[8]	Hauteur de tête d'entraînement/ lecture	THG-801	_	PLAY	Vis d'ajustement de hauteur de tête A	Monter la plaque THG-801 standard sur la plaque de réception de cassette, puis tourner le calibre latéralement et ajuster les vis de sorte que le calibre correspond au guide de bande.	

# **REGLAGE**

N.	ITEM	REGLAGES DE L'ENTREE	REGLAGES DE LA SORTIE	REGLAGES DU MAGNETOPHONE A CASSETTE	POINTS DE L'ALIGNEMENT	ALIGNER POUR	FIG
SEC	TION MAGNETOPHONE	A CASSETTE I	BANDE : NORMAL, DOLB	Y: OFF, INPUT: LINE		0dBz=0,775	V
[9]	Réglage de la tête d'enregistrement/ lecture	THG-801	-	PLAY	Vis d'ajustement d'inclinaison de tête B	Tourner le calibre THG-801 latéralement et le positionner de sorte qu'il soit perpendiculaire à la surface de tête. Ajuster la vis B de sorte que la plaque standard d'extrémité de calibre arrive en contact.	
	La hauteur de tête peut ê	etre modifiee en effecti	uant l'ajustement dans la	procedure (9), donc repe	eter plusieurs fois les	procedures de reglage (8) et (9).	
	DEMAGNETISATION		_	ALIMENTATION : COUPEE	Tête d'enregistrement/ lecture	Démagnétiser la fête d'enregistrement/lecture avec un effaceur de tête.	
[10]	NETTOYAGE	-	_	_	Tete d'enregistrement /lecture, tête d'effacement, cabestan, galet pressur	Nettoyer la fête d'enregistrement/lecture, la fête d'effacement, le cabestan et le galet presseur avec un coton-tige légèrement trempé dans de l'alcool.	
[11]	Azimut	SCC-1727 MTT-111 TCC-110 3 kHz,-4dB	_	PLAY	Vis d'ajustement de l'azimut ©	Ajuster la sortie au maximum pour la sortie de 3 kHz, puis régler la vis d'azimut © de sorte que la longueur d'onde sur l'osoilloscope approche d'une linéarité de 45 deg.	
,	Vérifier les réglages dans	s les procédures (8), (9	9) et (11).				
[12]	Vérifier avec une bande miroir	Bande miroir	_	PLAY	_	Reproduire la bande miroir et vérifier que les rebords de la bande ne touchent pas le guide de bande.  En cas de contact, répéter les procédures (8), (9) et (11) pour effectuer le reglage.	

Retourner à la procédure (3) . (KX-9050/S)

### **ABGLEICH**

#### AUFNAHME-/WIEDERGABETEIL

Nr.	GEGENSTAND	EINGANGSEIN- STELLUNG	AUSGANGSEIN- STELLUNG	CASSETTENDEC- KEINSTELLUNG	ABGLEICH PUNKTE	ABGLEICHEN FUR	ABB
TA	PE: NORMAL, DOLB	Y: OFF, INPUT: L	INE			0dBs=0,77	75V
[1]	VORMAGNET- ISIERUNGSOSZILLA- TORFREQUENZ	Nicht bespielte Bader in das Deck einlegen	Den Frequenzmesser zwischen TP5 und GND oder TP6 und GND schlieβ en	REC	L33 (X26-129 B/2)	So einstellen, daß der Frequenz messer 210 kHz anzeigt.	
[2]	VORMAGNET- ISIERUNGS- STROMVERLUST	Ein nicht bespieltes Band in das Deck einlegen	Wechselspannungsmeter zwischen TP5 und TP6 schließen.	Ein Metallband einlegen.	L 23 (L) L 24 (R) (X26-129 B/2)	Minimal	
[3]	HX VCA	ıı	Oszilloskop zwischen TP3 und TP4 schlien	REC	L 31 (L) L 32 (R) (X26-129 B/2)	Minimal	
[4]	WIEDERGA- BEPEGEL (1)	MTT-150 400Hz (200nWb)	(B)	(DOLBY OFF : 9050) (DOLBY S : 9050S) FLAY	VR 1 (L) VR 2 (R) (X26-129 A/2)	Ausgangspegel : -1.2dBs	
		MTT-256,SCC-1727 315Hz (160nWb)				Ausgangspegel: -4.0dBs	
		MTT-256,TCC-160 315Hz (250nWb)				Ausgangspegel: 0 dBs	
[5]	WIEDERGA- BEPEGEL (2) (KX-9050/S)	MTT-150 400Hz	(B)	PLAY	VR 5 (L) VR 6 (R) (X26-129 A/2)	Ausgangspegel : -1.2dBs	
		MTT-256,SCC-1727 315Hz				Ausgangspegel: -4.0dBs	
		MTT-256,TCC-160 315Hz				Ausgangspegel: 0 dBs	
[6]	WIEDERGABE- TRIMMER	MTT-114 TCC-153,SCC-1727 -10dB, 10kHz	(B)	PLAY	VR 3 (L) VR 4 (R) (X26-129 A/2)	Die Stellwiderstäde so ein- stellen, daß der 10-kHz- Pegel -10 dBs berägt	L
[7]	VORMAGNETISI- ERUNGSSTROM	(A) 1kHz, -30dBs 10kHz, -30dBs	(B)	REC VR (LEVEL, BALANCE) so einstellen, da β der REC-Monitor- Ausgang bei 1 kHz -24 dBs wird, dann ab- wechselnd ein Signal mit 1 kHz und 10 kHz aufzeichnen und wiedergeben.	VR 31 (L) VR 32 (R) (X26-129 B/2)	Den Vormagnetisierungsstrom- Stellwiderstand so einstellen, da	
[8]	AUFNAHMEPEGEL	(A) 1kHz, -30dBs		Unter den in <7> eingestellten Bedingungen ein 1-kHz- Signal aufzeichnen und wiedergeben	VR 21 (L) VR 22 (R) (X26-129 B/2)	Die Stellwiderstäde so einstellen, da β ein Wiederga- bepegel von -24 dBs erhalten wird.	
[9]	FL-SPITZEN- PEGELMETER	(A) 1kHz, -10dBs	-	REC PAUSE REC VR (LEVEL, BALANCE) so einstellen, daß der Mo- nitorausgang bei 1 kHz - 4 dBs beträgt.	VR 95(R) (X25-471 A/8)	Auf denselben Pegel wie den des iinken Kanals einstellen	

Hinweis: Bei Punkt (4) und (5).

Obwohl 3 Bandsorten für die Wiedergabepegeleinstellung vorliegen, genüt der Gebrauch eines Bands zur Einstellung. Dies bedeutet , das nicht alle 3 Bandsorten verwendet werden müssen. Die Einstellung kann auch mit einem Testband mit demselben Magnetflu # und derselben Frequenz der oben erwähnten Bänder durchgefürt werden, indem der Wiedergabeausgang dem Sollausgangspegel dieses Bands gemaß Einstellverfahren angeglichen wird.

### **ABGLEICH**

### LAUFWERK

Nr.	GEGENSTAND	EINGANGSEIN- STELLUNG	AUSGANGSEI- NSTELLUNG	CASSETTENDEC KEINSTELLUNG	- ABGLEICH PUNKTE	ABGLEICHEN FUR	ABB.
CA	ASSETTENDECK-TEI	L TAPE: NORM	MAL , DOLBY: O	FF, INPUT: LINE		0 dBs = 0,	775 V
	AUFAHME/WIEDER	RGABEKOPF					
[1]	ENTMAGNETISI- ERUNG	_	_	POWER :OFF Die Cassettenklappe entfernen.	Aufnahme/Wie- dergabekopf (REC/PLAY)	Den REC/PLAY-Kopf mit einem Tonkopf-Entmagnetisierer entmagnetisieren.	
[2]	REINIGUNG	_	_		REC/PLAY-Kopf, Löschkopf, Tonwelle, Andruckrolle.	REC/PLAY-Kopf, Löschkopf, Tonwelle und Andruckrolle mit einem leicht mit Alkohol angefeuchteten Wattestäbchen reinigen.	
[3]	Kontrolle des Aufnahme/Wieder- gabekopfs. (KX-9050S)	MTT-94201		PLAY	_	Sicherstellen, daß der Pegelunterschied zwischen dem linken und rechten Kanał innerhalb von 4 dB liegt. Wenn der Unterschied 4 dB überschreitet, die in (7) beschriebenen Einstellungen vornehmen.	
[4]	Azimut	MTT-114 TCC-153,SCC-1727 10kHz, -10dB	_	PLAY	Azimut-Ein- stellschraube ©	Den Ausgang auf den Höchstwert einstellen, dann die Azimut- Schraube so justieren, da ß sich die Oszilloskop-Wiederanst- iegswellenläge einer Linearität von 45 Grad annähert.	
[5]	Mit Spiegelband überprüren	Spiegelband	-	PLAY	_	Das Spiegeiband abspielen und sicherstellen, da ß die Bandkanten die Bandfürung nicht berüren. Wenn sie die Bandfürung berüren, die ab (7) beschriebenen Einstellungen durchfuren.	
[6]	BANDGES- CHWINDIGKEIT	(A) SCC-1727 MTT-111, TCC-110 3kHz,-4dB	_	PLAY	Trimm-Potenti- ometer im Gleich- strommotor	Die Bandgeschwindigkeit so ein- stellen, da ß ein 3-kHz-Signal in der Mitte des Bands erzeugt wird.	
[7]	Höhe des Zuführan druckrollenarms	THG-801	_	FLAY	Zufürandruckrol- lenarm- Höhenein- stellschraube D	Die Standard-THG-801-Platte an der Cassettenempfangsplatte montieren, dann die Blocklehre seitw ≡ ts drehen und die Schrauben so einstellen, da β die Lehre in die Bandfurung pa β.	
[8]	Höhe des REC/ PLAY-Kopfes	THG-801		PLAY	Kopfhöhenein- stellschraube	Die Standard-THG-801-Platte an der Cassettenempfangsplatte montieren, dann die Blocklehre seitw = ts drehen und die Schrauben so einstellen, da β die Lehre in die Bandfurung pa β.	

### **ABGLEICH**

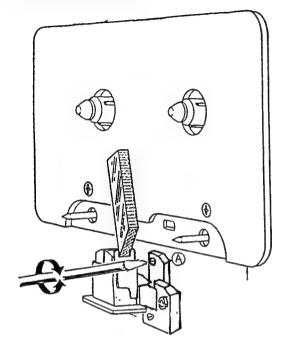
Nr.	GEGENSTAND	EINGANGS- EINSTELLUNG	AUSGANGS- EINSTELLUNG	CASSETTENDECK- EINSTELLUNG	ABGLEICH- PUNKTE	ABGLEICHEN FÜR	ABB.
CAS	SSETTENDECK-TEIL	TAPE: NORM	AL, DOLBY: OF	F, INPUT: LINE		0 dBs = 0,775 V	
[9]	Aufnahme/Wie- dergabekopf-Ein- stellung	THG-801	_	PLAY	POWER: OFF Das Cas- settenklappe entfernen, B	Die THG-801-Blocklehre seitwärts drehen und so positionieren, daß sie senkrecht zur Kopfoberfläche ist. Die Schraube B so einstellen, daß Lehre und Standard-Platte miteinander in enge Beuhrung gelangen.	
Die hole	•	h Einstellverfahre	n (9) ge an dert	werden, daher Eins	stellverfahren (	(8) und (9) einige Male wieder-	-
	ENTMAGNETISI- ERUNG		_	POWER: OFF Die Cassetten- klappeentfernen.	Aufnahme/Wie- dergabekopf (REC/PLAY)	Den REC/PLAY-Kopf mit einem Tonkopf-Entmagnetisierer entmagnetisieren.	
[10]	REINIGUNG	_	_	_	REC/PLAY-Kopf, Löschkopf, Tonwelle, Andruckrolle.	REC/PLAY-Kopf, Löschkopf, Tonwelle und Andruckrolle mit einem leicht mit Alkohol angefeu- chteten Wattestabchen reinigen.	
[11]	Azimut	SCC-1727 MTT-111 TCC-110 3kHz, -4dB	_	PLAY	Azimut-Ein- stellschraube	Den Ausgang für den 3-kHz- Ausgang auf den Hochstwert einstellen, dann die Azimut- Schraube C so einstellen, daß sich die Oszilloskop-Wiederanst- legswellenlänge einer Linearität von 45 Grad annähert.	
Die	Einstellungen bei Vei	rfahren (8), (9) ui	nd (11) uberprufe	en.			
[12]	Mit Spiegelband überprüfen	Spiegelband	_	PLAY	_	Das Spiegelband abspielen und sicherstellen, da β die Bandkanten die Bandführung nicht berühren. Wenn sie die Bandführung berühren, Verfahren (8), (9) und (11) zur Einstellung wiederholen.	

Zu Verfahren (3) zuruckkehren. (KX-9050S)

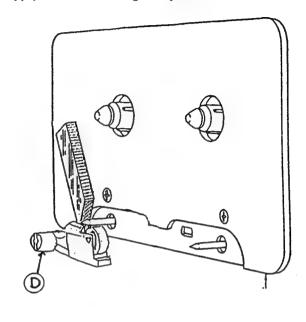
### **ADJUSTMENT**

### Adjusting REC/PLAY head

Head height adjustment



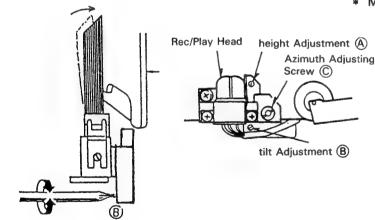
Suppry PINCH roller height Adjustment.



### Head tilt adjustment

Tape Speed Adjustment

\* MTT-94201 (TEST TAPE for HEAD height adjustment)

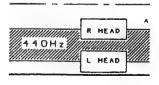


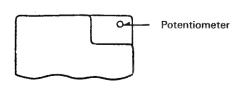


400 Hz Full track

440 Hz 0.8 mm width track

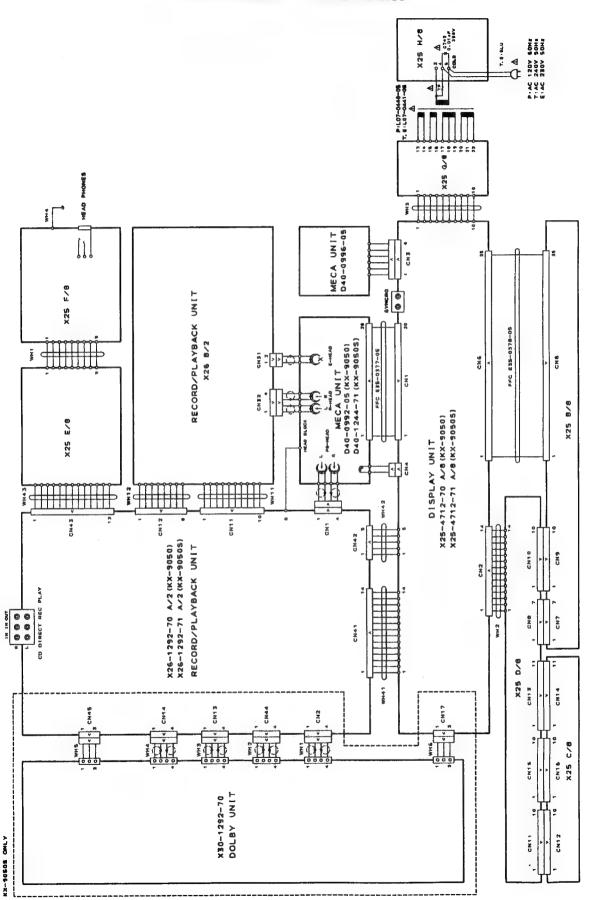
Level difference is about the same of L, R ch output when the adjustment is complate.



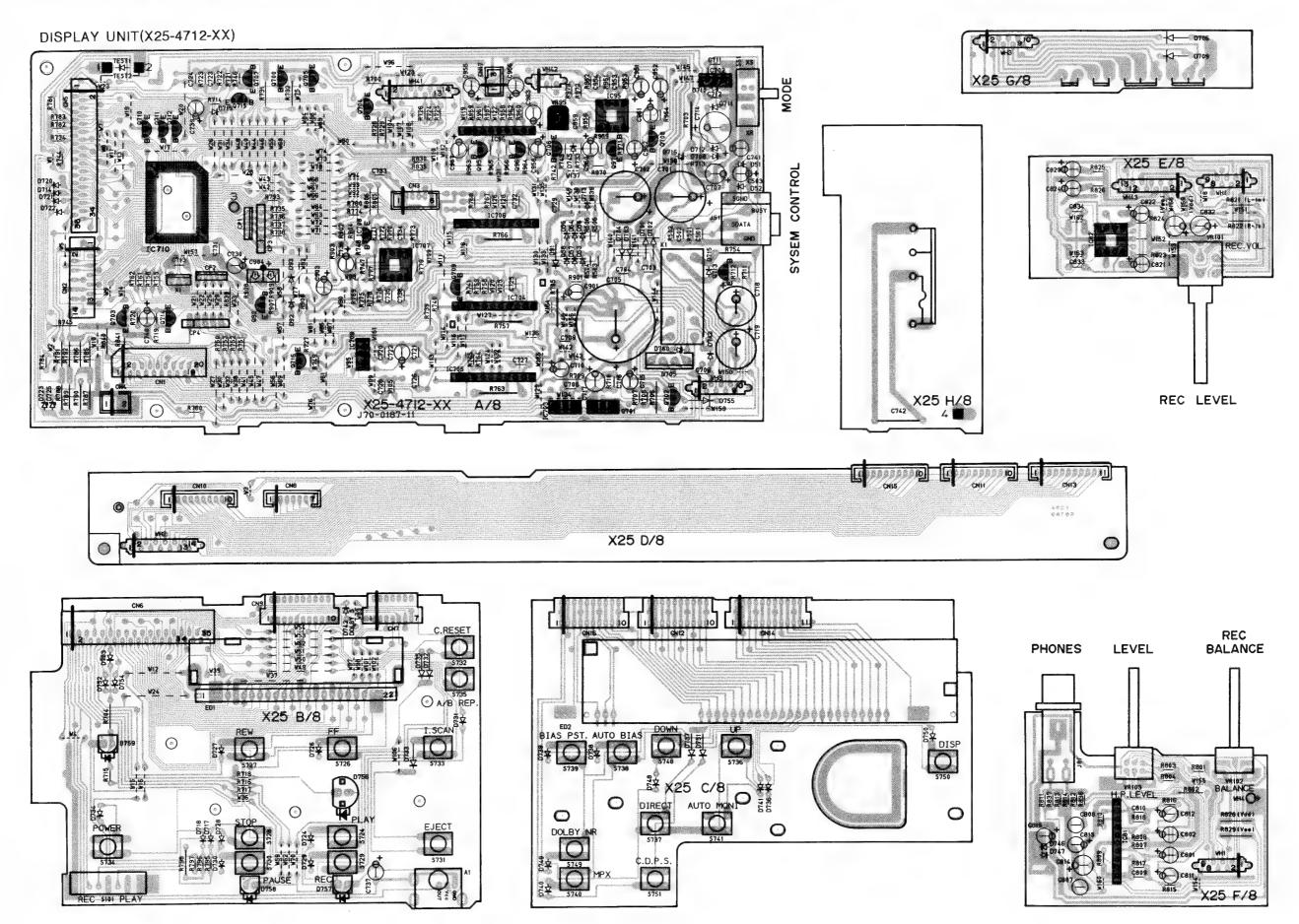


Capstan Motor

### **WIRING DIAGRAM**

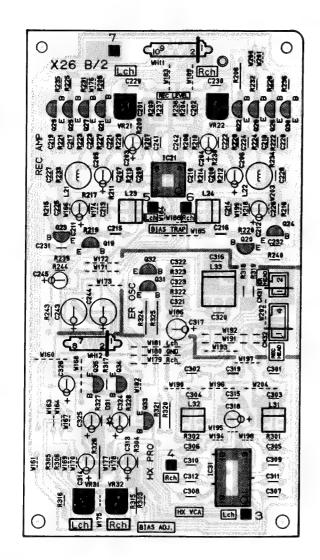


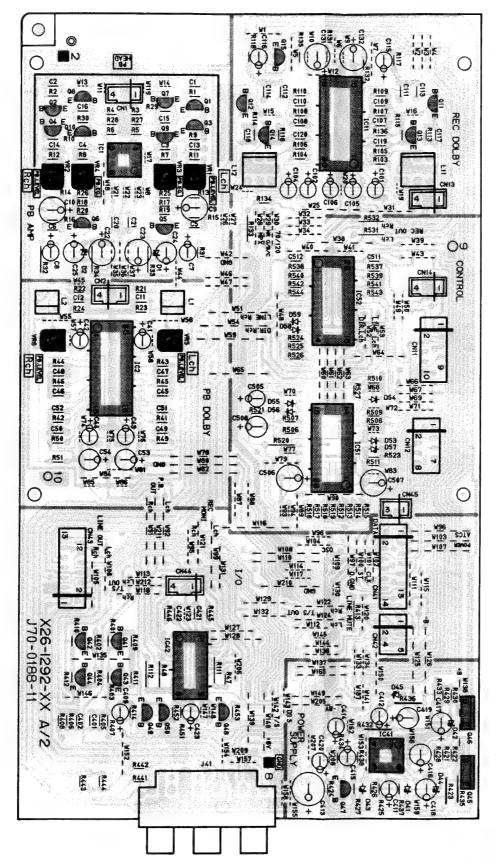
## PC BOARD (Component side view)



## PC BOARD (Component side view)

RECORD/PLAYBACK UNIT(X26-1292-XX) DOLBY UNIT(X30-1292-70) KX-9050S only

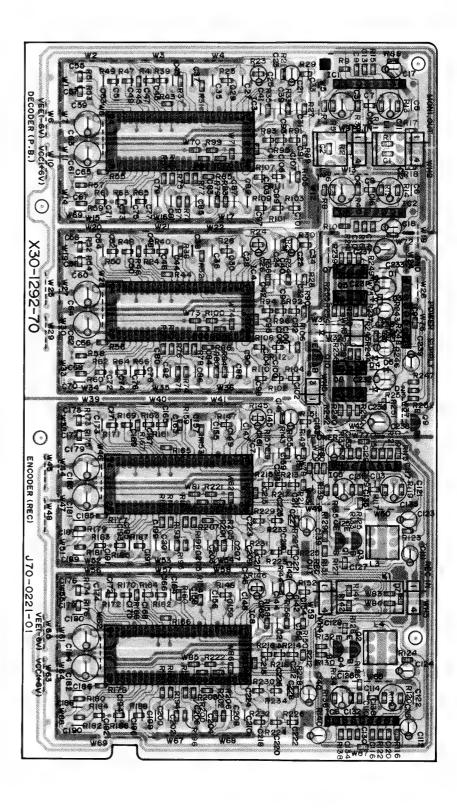




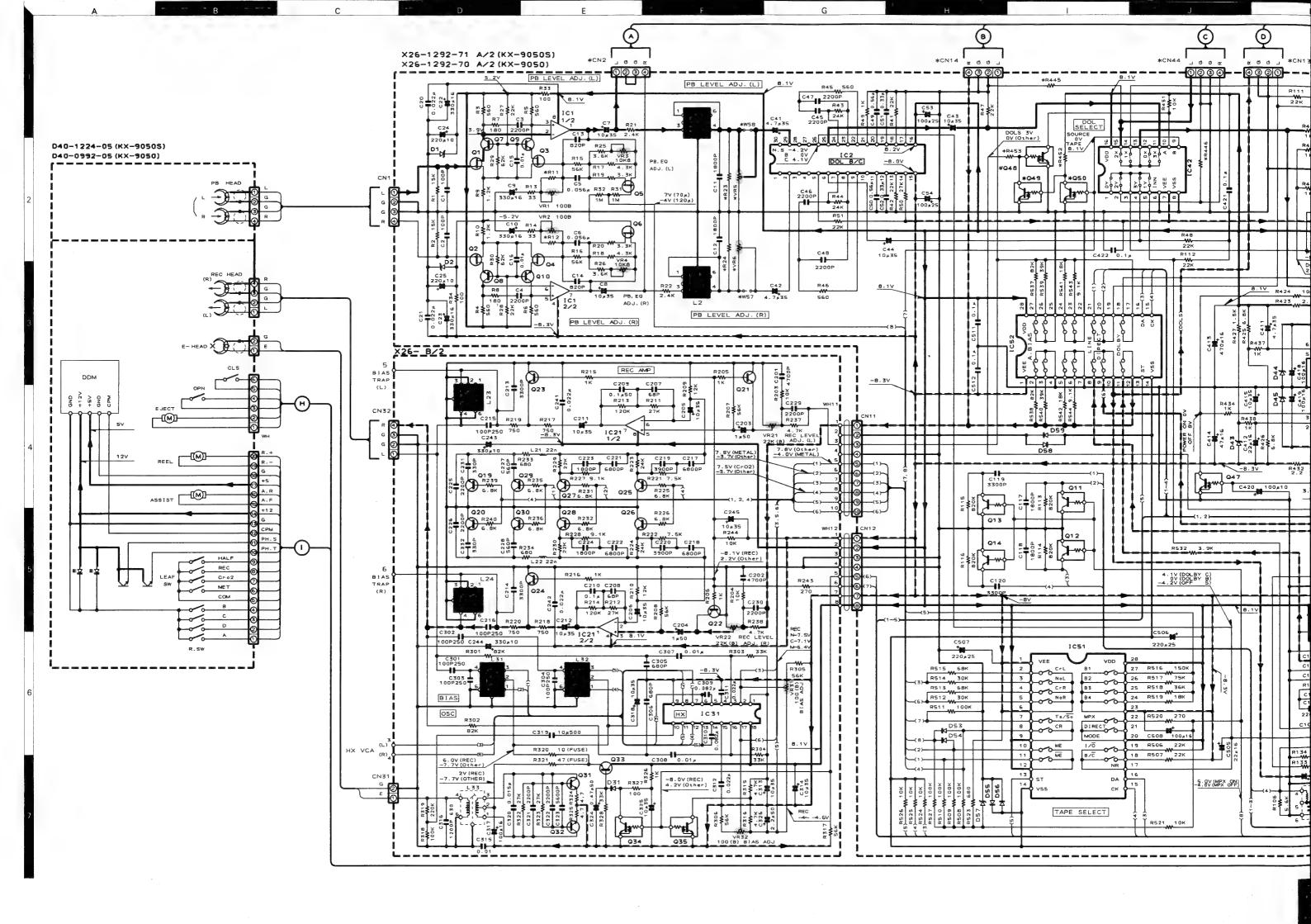
IN

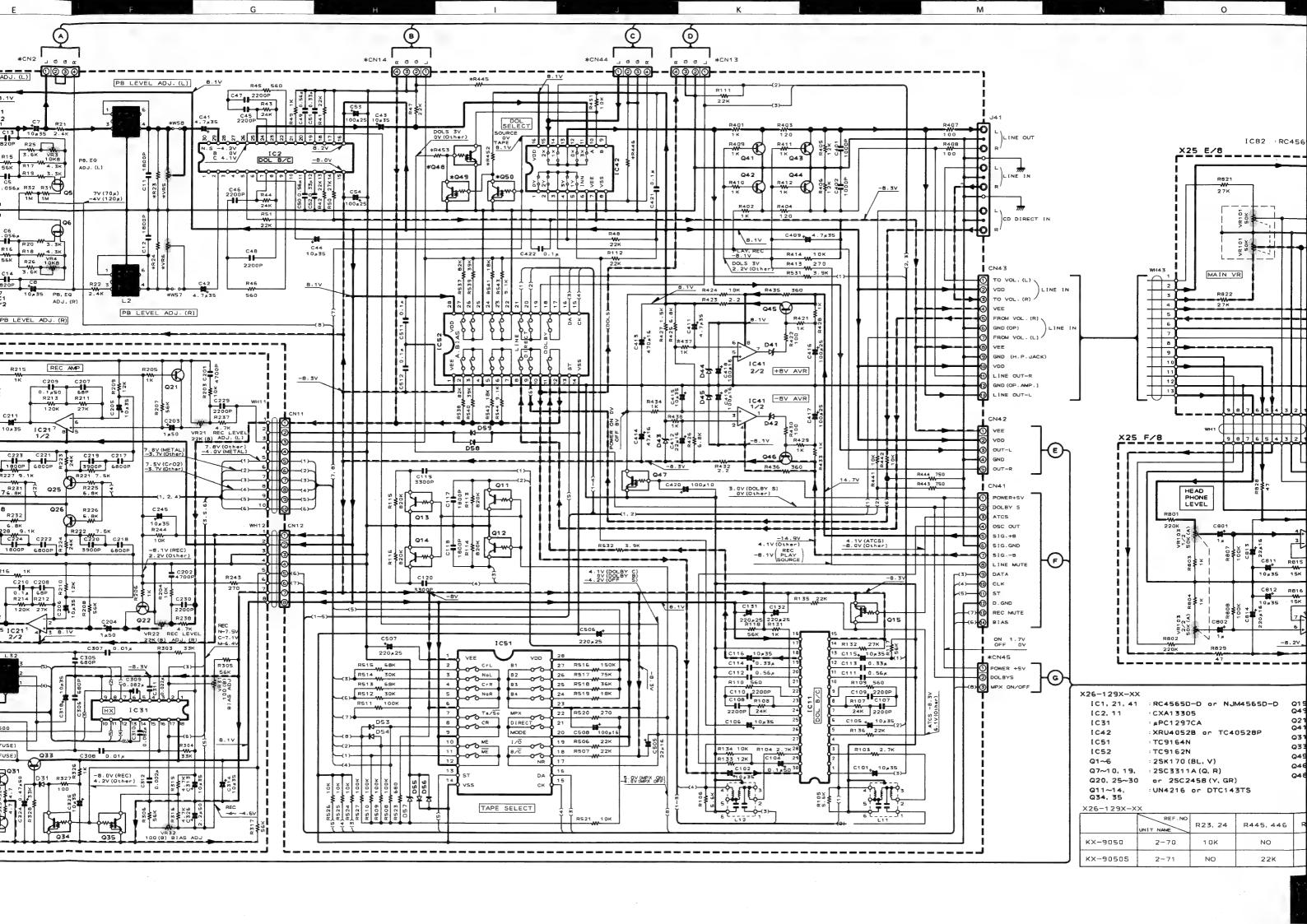
l N

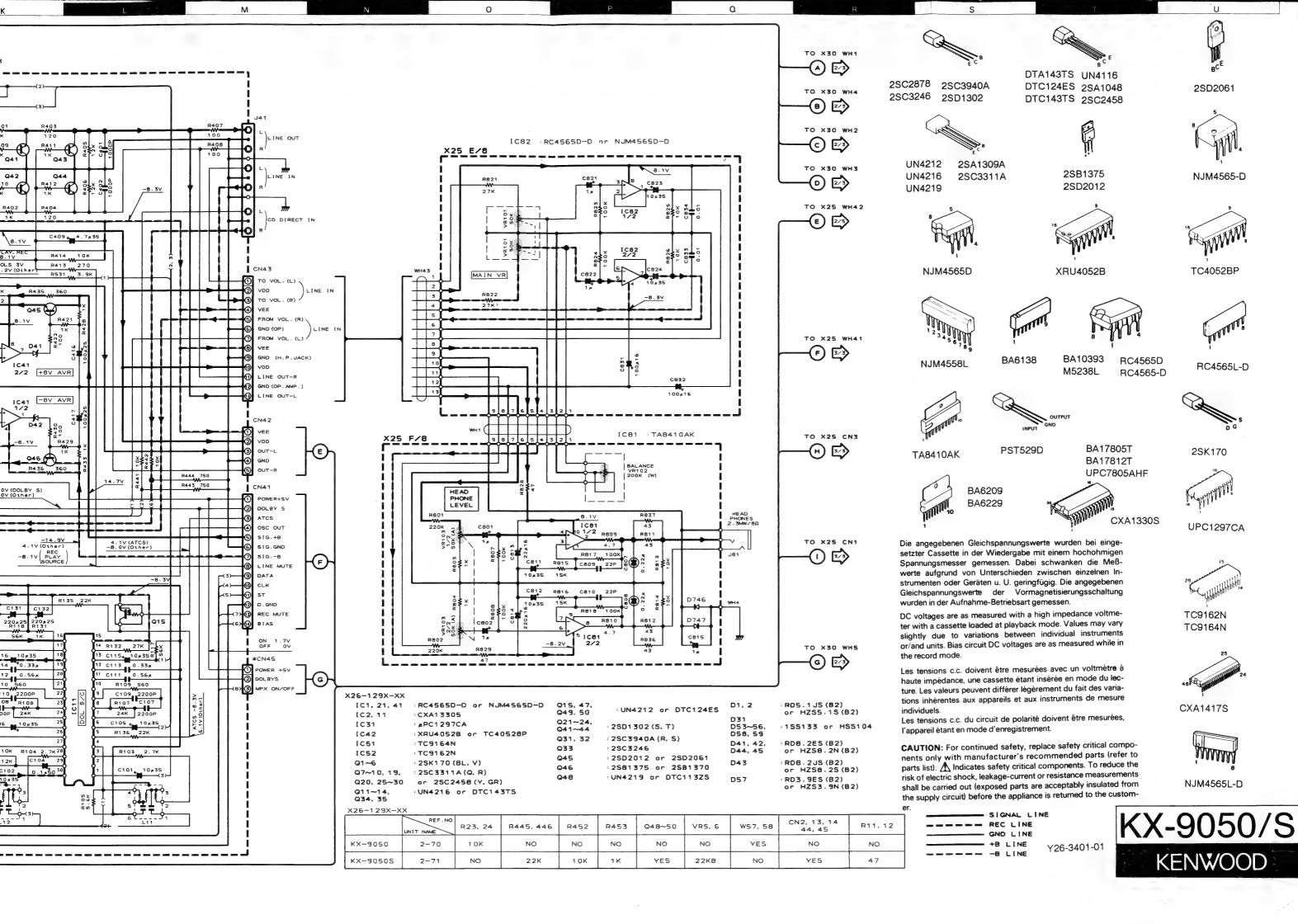
OUT

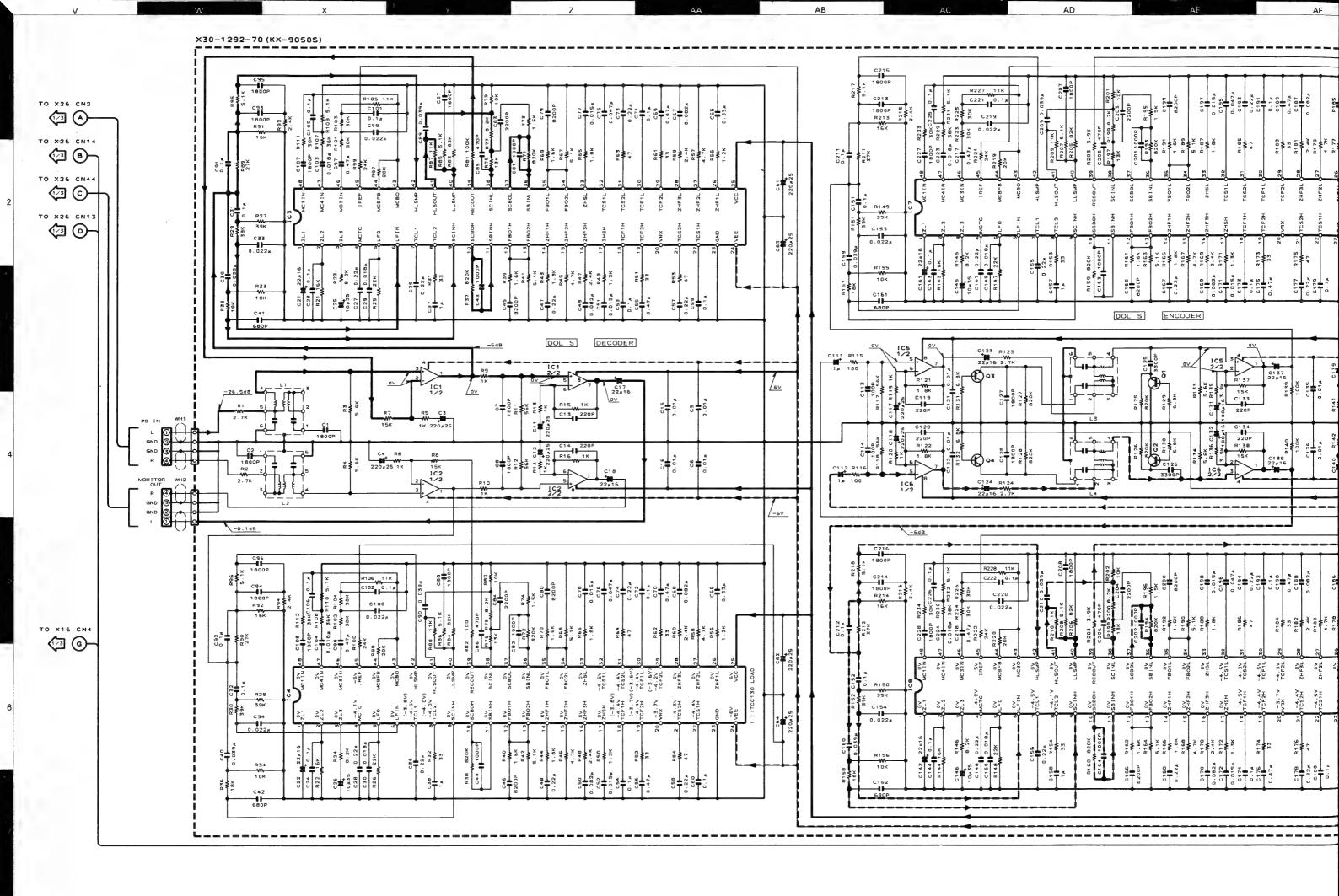


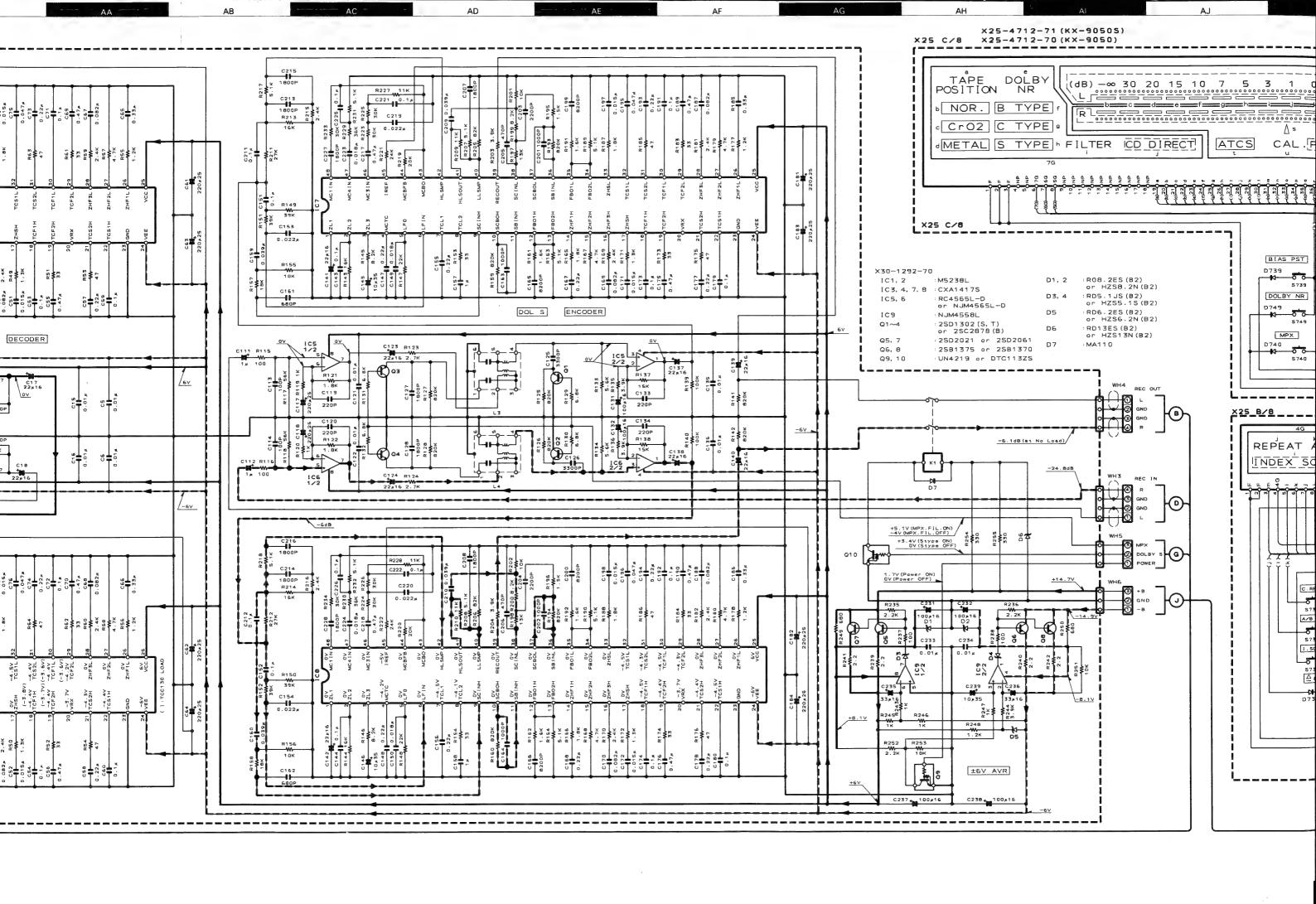
Refer to the schematic diagram for the values of resistors and capacitors.

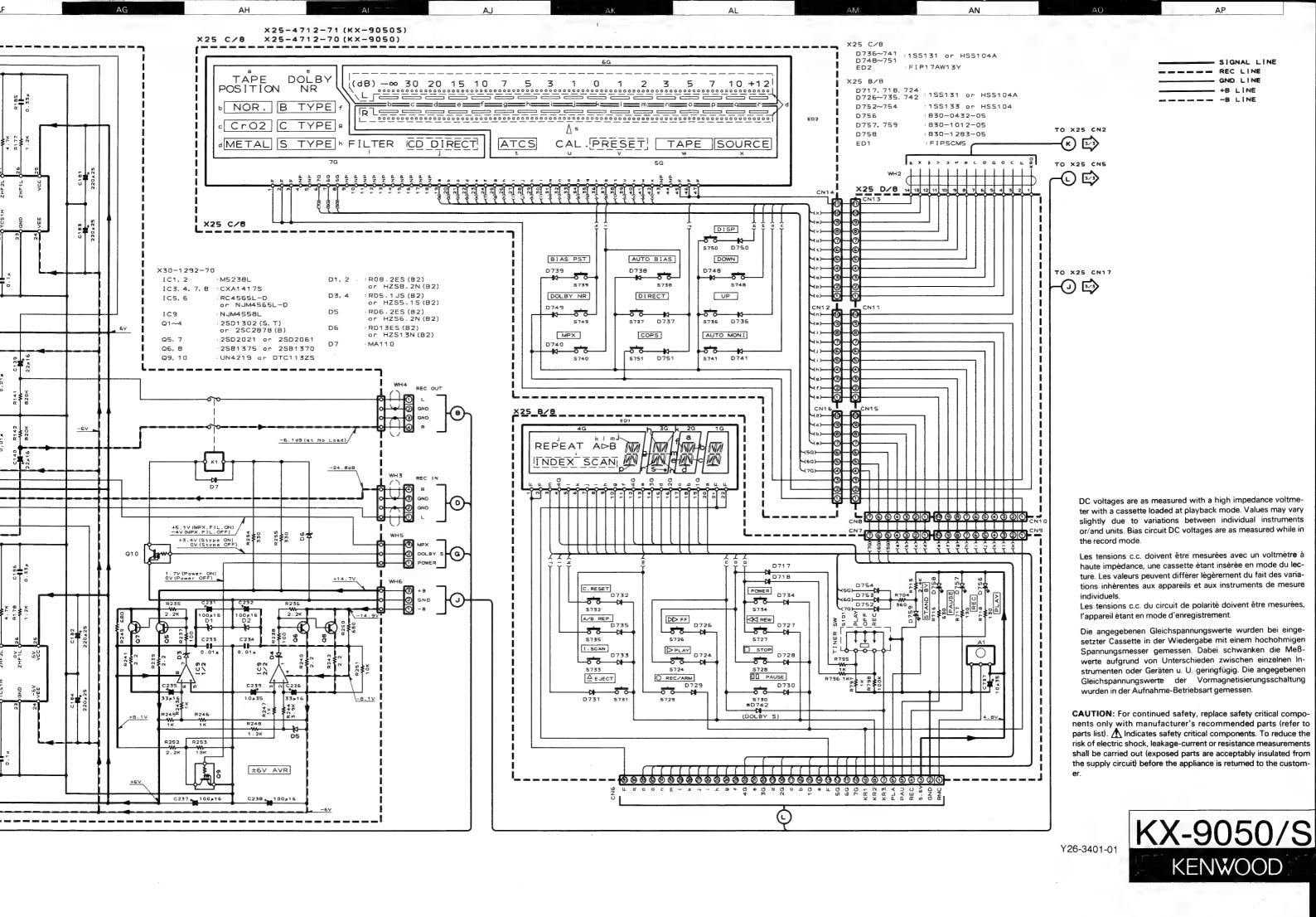


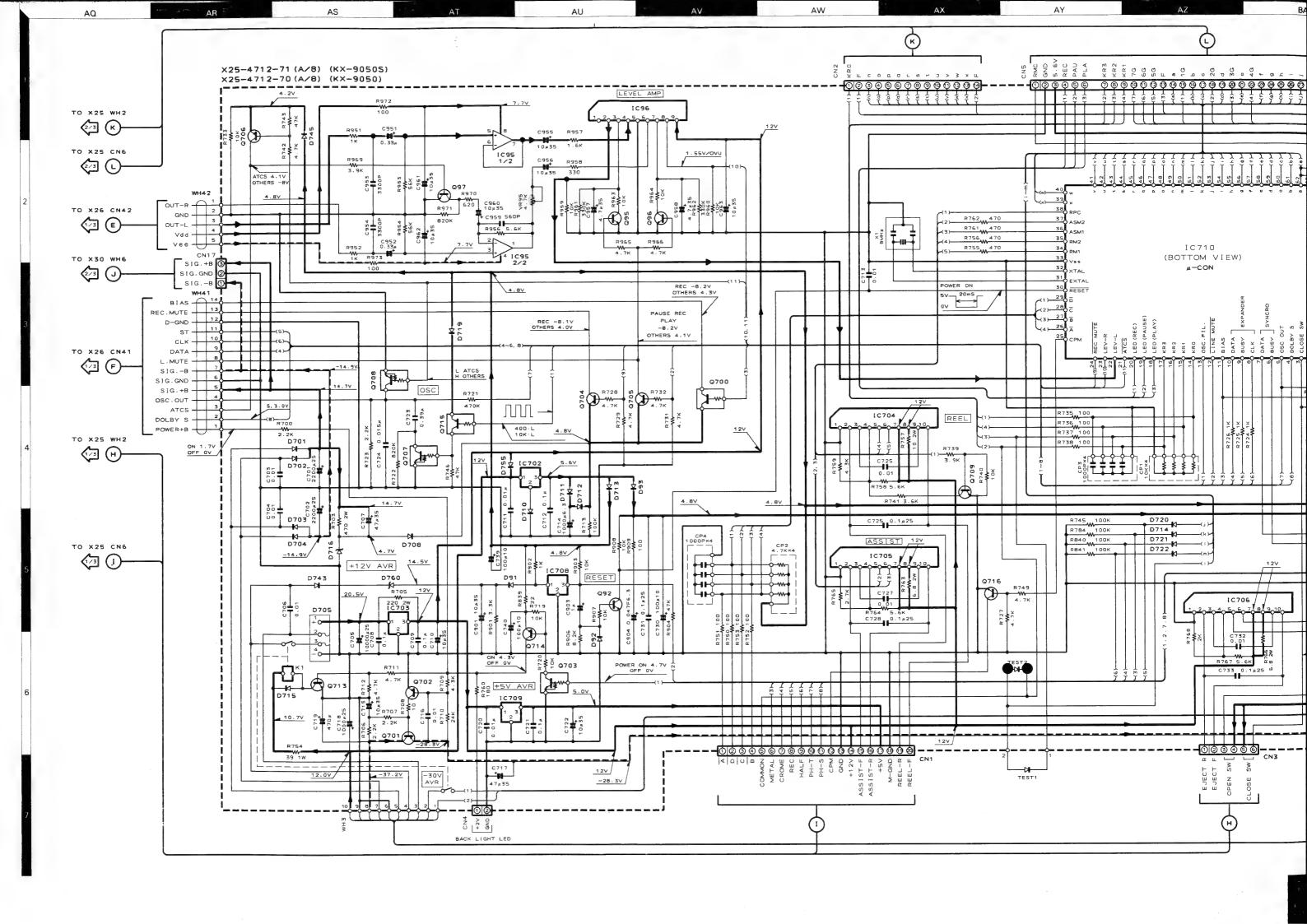


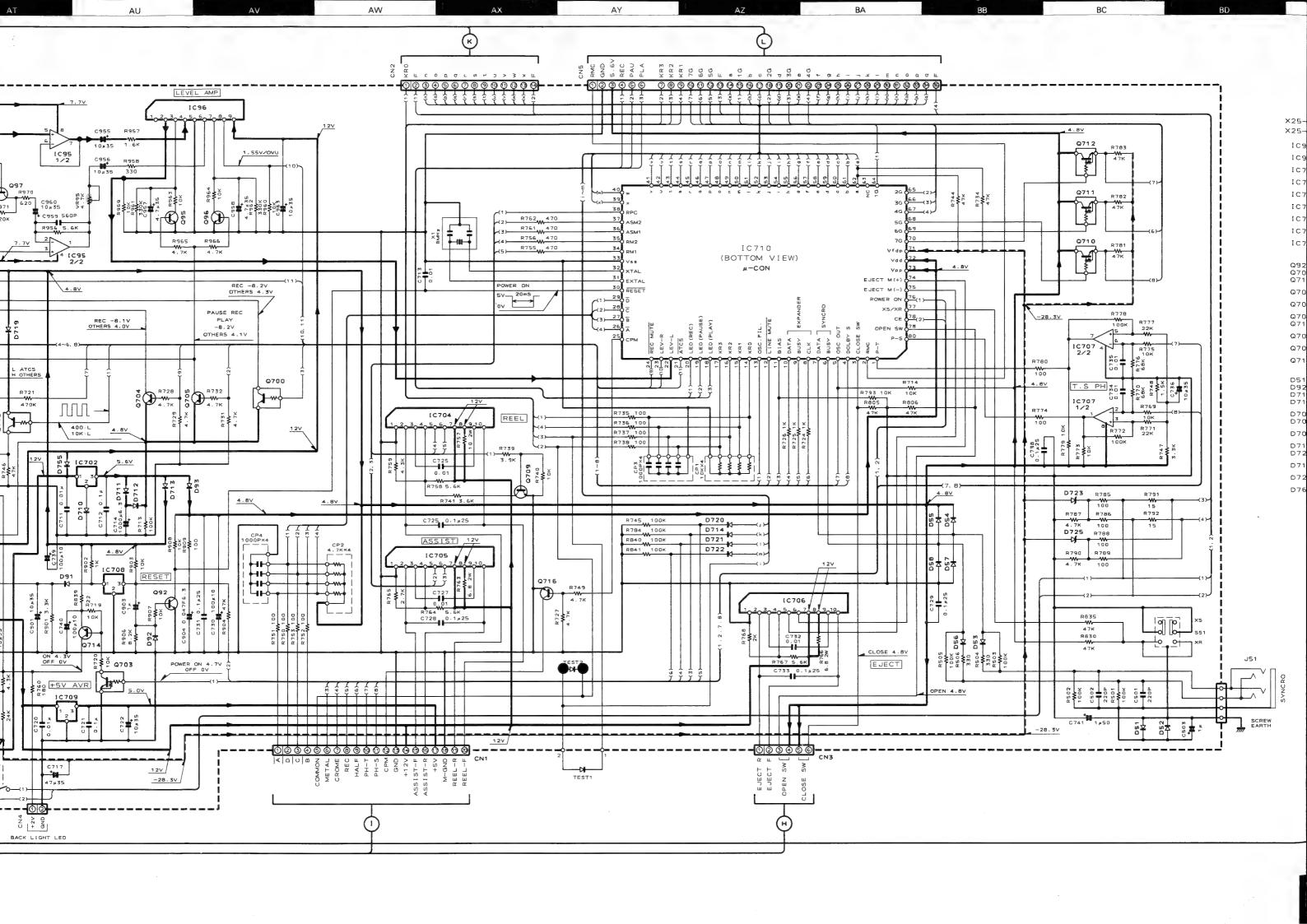


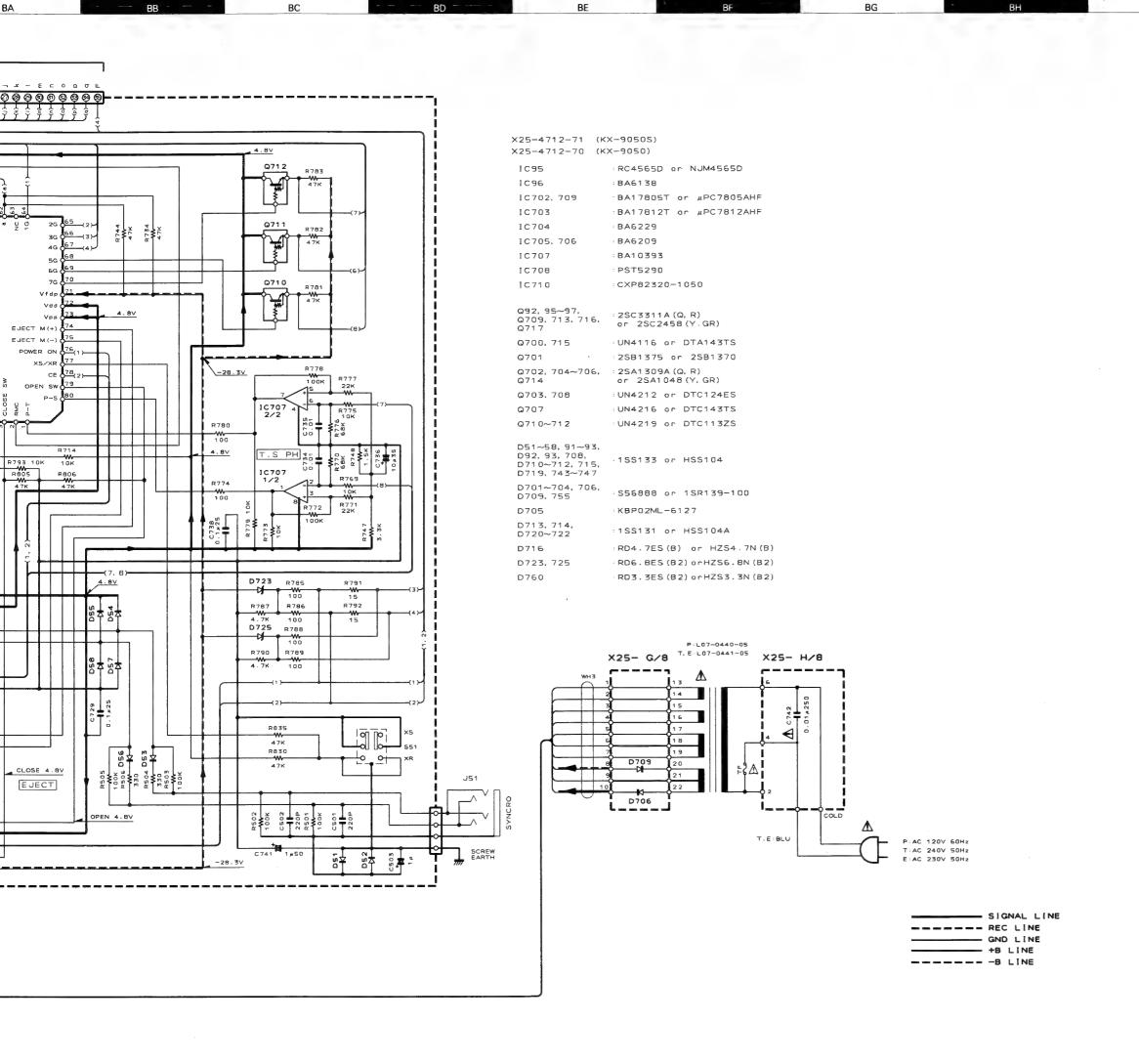












DC voltages are as measured with a high impedance voltmeter with a cassette loaded at playback mode. Values may vary slightly due to variations between individual instruments or/and units. Bias circuit DC voltages are as measured while in

BK

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance, une cassette étant insérée en mode du lecture. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Les tensions c.c. du circuit de polarité doivent être mesurées, l'appareil étant en mode d'enregistrement.

Die angegebenen Gleichspannungswerte wurden bei eingesetzter Cassette in der Wiedergabe mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig. Die angegebenen Gleichspannungswerte der Vormagnetisierungsschaltung wurden in der Aufnahme-Betriebsart gemessen.

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). A Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the custom-

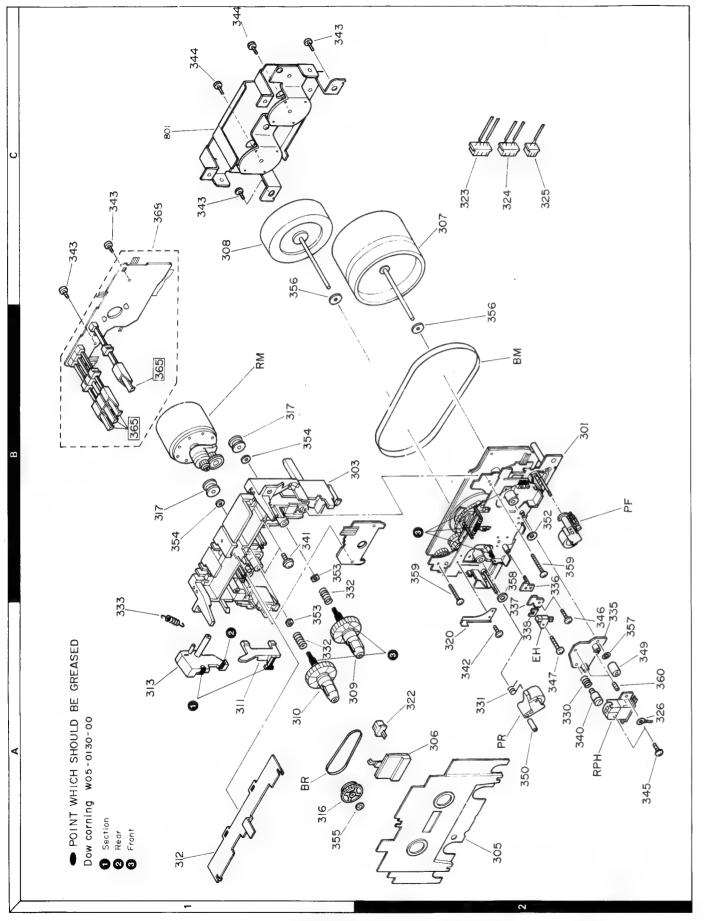
Y26-3401-01



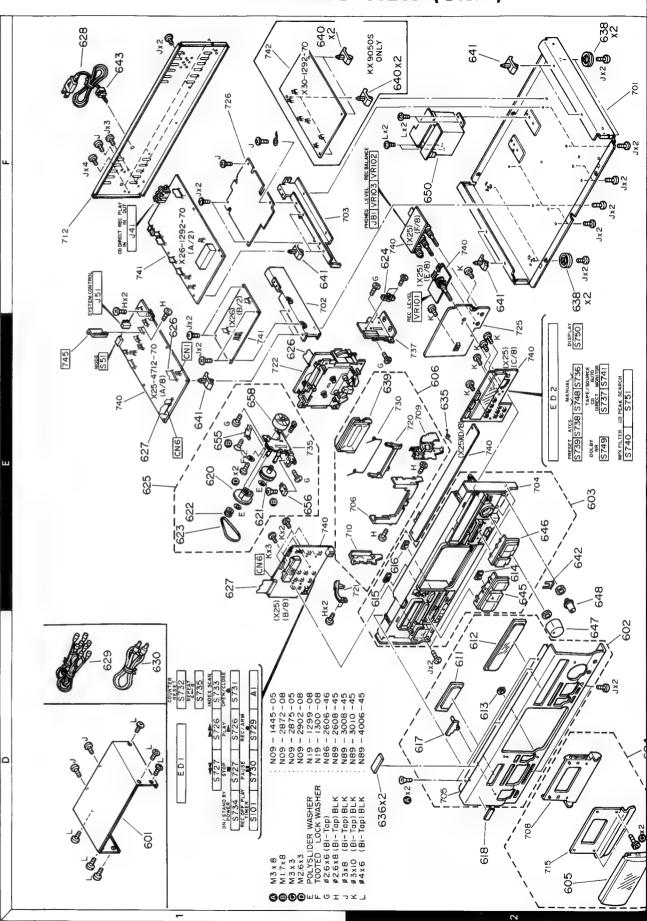
# KX-9050/S KX-9050/S

## **EXPLODED VIEW (UNIT)**

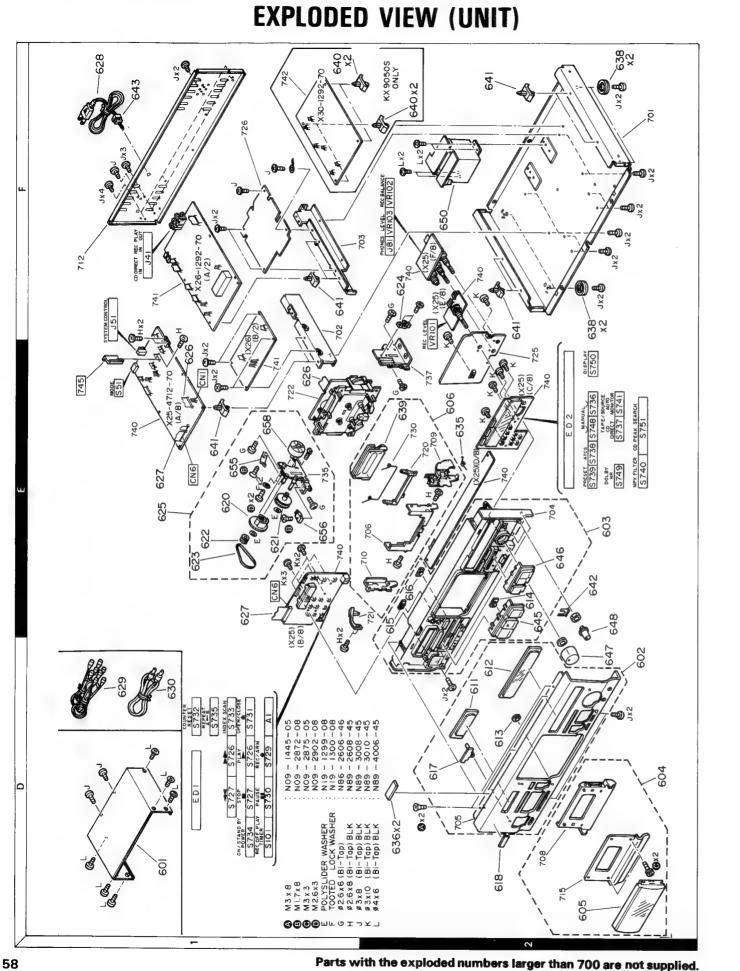
## **EXPLODED VIEW (MECHANISM UNIT)**



Parts with the exploded numbers larger than 700 are not supplied.



### **PARTS LIST**



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10   10   10   10   10   10   10   10			-	6-XX	\$/0506		1		28	321-3326-05	JACK MOUNTING HARDWARE	
Main		250	* * *	A60-0157-02	METALLIC CABINET PANEL ASSY DAME: ASSY				<u>.</u>	342-0078-05 361-0035-05 361-0307-05	POWER CORD BUSHING WIRE BAND WIRE BAND	
Mail		20.00	* * *	A22-1533-02 A53-1318-03	SUB PANEL ASSY CASSETTE LID ASSY		7 Z	645			KNOB TAPE CONTROL KNOB DOLBY, CD DIRECT, AUTO MONI	
10   10   10   10   10   10   10   10		20 20 20 20 20 20 20 20 20 20 20 20 20 2	* * *	A53-1350-03 A53-1319-03 A53-1301-10	CASSETTE LID ASSY CASSETTE LID CASSETTE HOLDER ASSY						KNOB REC LEVEL KNOB PHONES LEVEL	
10   10   10   10   10   10   10   10		20	*	810-1898-04	FRONT GLASS						POWER TRANSFORMER	. E
B12-0153-04   INDICATOR   BEC/ARM   BY   BEC/ARM   BY   BEC/ARM   BY   BEC/ARM   BY   BY   BY   BY   BY   BY   BY   B		250 550 550 550 550 550 550 550 550 550	* **		S EE			<b>808</b>	***	N09-2872-08 N09-2902-08 N19-1299-08 N19-1300-08	TAPPING SCREW M1.7X8 PAN SCREW M2.6X3 POLYSLIDER WASHER /2.5X6.0X0. TOOTED LOCK WASHER /2.6	w
MARTING CARD   MARKATY CARD   MARK		20 20 20 20	*	B12-0159-04 B12-0163-04	REC/ARM ON/STAND			655 656		S74-0011-08 S74-0012-08	SWITCH	
B46-0143-13   WARRANTY CARD   TOTAL CHOLISH)   TOTAL CHOLISH ANNAL CHERNH)   TOTAL CHOLISH ANNAL CHERNHO CHARNE C		20		843-0287-04 846-0121-13 846-0122-23	KENWOWD BADGE WARRANTY CARD WARRANTY CARD	<b>o</b> m	ß	929	2	601.	. 0050 2 74 .	0
BODING   CONTINUE			***	B46-0143-13 B60-0688-00 B60-0689-00 B60-0689-00	ARD N MANUAL N MANUAL N MANUAL	F 8801	w.	D756 D757 D758 D759		Š S	PH(U) 10-51) 0A) 10-51)	
Barrer   B		5555	* * * * *	D12-0142-08 D15-0332-08 D15-0333-08 D16-0334-08	EY	2		C501,502 C503 C701,702 C703,704 C705		CC45FSL1H221J CE04KW1H010M CE04KW1E222M CK45F1H103Z C90-1872-05	220PF 1:0UF 2200UF 0:010UF	
## # ## ## ## ## ## ## ## ## ## ## ## #		2F	*	D40-0996-05	28			C706 C707		CK45FP1H103Z CE04KW1V470M	0.010UF Z	
September   Sept		## E	* *	E35-0377-05 E35-0378-05	FLAT CABLE X25(CN6) FLAT CABLE MECHA-X25(CN1)	ц		C708,709 C710 C711		CF92FV1H104J CEO4KW1V100N CF92FV1H103J	0.10UF 10UF 0.010UF	
## ## ## ## ## ## ## ## ## ## ## ## ##		711		E30-0439-03 E30-0974-05 E30-1416-05	AC POWER CORD AC POWER CORD			C712 C713		CK45FF1H103Z	0.10UF	
* GO1-3466-04 TORSION COLL SPRING  C13-0439-04 CUSHION  C13-0439-04 CUSHION  * H50-0198-04 ITEM CARTON CASE  * H50-0198-04 ITEM CASTON CASTON CASE  * H50-0198-04 ITEM CASTON CASTO		100		30-0505	AUDIG CORD CORD WITH PLUG			C714 C715 C716		CE04KW1V100M CE04KW1V100M CK45FF1H103Z	1000UF 10UF 0.010UF	
* H50-0199-04 ITEM CARTON CASE  * H10-5232-04 ITEM CARTON CASE  * H10-5232-02  * H10-5233-02  * H10-5232-04 PROTECTION BAC (235X350X0.03)  * H25-0220-04 PROTECTION BAC (235X350X0.03)  * H25-023-04 PROTECTION BAC (235X350X0.03)  * H25-0320-04 PROTECTION BAC (2010TO-05)  * H25-0310-05  * H30-010TO-05  * H30-010TO-05  * H30-010TO-05  * H30-010TO-05  * H30-010TO-05  * H30-010TO-010TO-05  * H30-010TO-010TO-05  * H30-010TO-01		2E 2D	*	G01-3466-04 G13-0439-04	O			C717 C718		CE04KW1V470M CE04KW1E102M	47UF 1000UF	
* HIG-523-02 POLYSTYRENE FRANED FIXTURE (R) C724 CEGAKWIN100M ELECTR® 10UF C724 C92FVH1994 MF 0.39UF C724 CF92FVH1153J MF 0.15UF C724 CF92FVH1153J MF 0.15UF C724 CF92FVH1153J MF 0.15UF C725 CF92FVH103Z CFRANIC 0.10UF C725 CF92FVH103Z CFRANIC 0.10UF C725 CFRANIC 0.10UF C725 CFRANIC 0.10F			* * *	H50-0198-04 H50-0322-04	CASE CASE FOAMED FIXTURE		× Ω	C720 C721		CF92FV1H103J	4.700F 0.010UF 0.10UF	
H25-0232-04 PROTECTION BAG (235X350X0.03) PE S C725 CK45FFIHI03Z CERAMIC 0.010FF H25-0232-04 PROTECTION BAG (235X350X0.03) E N C726 C91-0700-05 CERAMIC 0.10FF H25-0369-04 PROTECTION BAG (0232 PRINTED) T C727 CK45FFIHI03Z CERAMIC 0.010FF C726 C91-0700-05 C91-070			*	H10-5233-02 H25-0002-03	FOAMED FIXTURE AG (100X250)			C722 C723		CB04KW1V100M CF92FV1H394J CF92FV1H53T	3CTR® 10UF 0.39UF	
H25-0651-04 PROTECTION BAG (0232 PRINTED) T C727 CK45FF1H103Z CERAMIC 0.010UF				H25-0232-04 H25-0232-04 H25-0388-04	BAG	8 8	SZ	C725 C726		CV45FF1H103Z C91-0700-05	0.010UF 0.1UF	
				H25-0651-04	BAG	<b>-</b>		C727 C728,729		CK45FF1H103Z C91-0700-05	0.010UF 0.1UF	

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### **PARTS LIST**

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	KX-	KX-9050/S			642	2E	J21-	3326-05	JACK MOUNTING HARDWARE			
	* A01-2903-01 * A60-0157-02 * A60-0202	METALLIC CABINET PANEL ASSY PANEL ASSY		zv		<del></del>	361- 361-	342-00/8-03 361-0035-05 361-0307-05	WIRE BAND			
	A A 25	SUB PANEL ASSY CASSETTE LID ASSY		2 2	645 646	**		K29-4327-03 K29-4328-03	KNOB TAPE CONTROL KNOB DOLBY, CD DIRECT, AUTO MONI	TO MONI		
	* A53-1350-03 * A53-1319-03	CASSETTE LID ASSY		Ŋ	648	20 2E		1330-04	KNOB REC LEVEL KNOB PHONES LEVEL			
	A53-1321	[변 :		7	<ul><li>♠ 650</li><li>♦ 650</li></ul>	2F **		L07-0440-05 L07-0441-05	POWER TRANSFORMER POWER TRANSFORMER		'9' E	
	* B10-1898-04 * B10-1899-04 B11-0237-14 * B12-0095-04	FRONT GLASS FRONT GLASS COLOR FILTER INDICATOR PLAY INDICATOR PAUSE			<b>20</b> C 122 EL	* * *		N09-2872-08 N09-2902-08 N19-1299-08 N19-1300-08	TAPPING SCREW M1.7X8 PAN SCREW M2.6X3 POU'YSLIDER WASHER /2.5X6.0X0. TOOTED LOCK WASHER /2.6	(6.0x0.	ъ	
	* B12-0159-04 B12-0163-04	INDICATOR REC/ARM INDICATOR ON/STAND BY			655 656	16		S74-0011-08 S74-0012-08	SWITCH			
	843-0287-04 846-0121-13 846-0122-23	KENWOOD BADGE WARRANTY CARD WARRANTY CARD	o. m	رم م	658	1E	T42-	_i	0.00		í	
_			1	_		OIS	SPLAY UNIT	XX (X	(X25-4712-70:9050,2-71	: 9050S	3)	
	## B46-0143-13 ## B60-0688-00 ## B60-0689-00 ## B60-0689-00	WARRATY CARD INSTRUCTION MANUAL (ENGLISH) INSTRUCTION MANUAL (FRENCH) INSTRUCTION MANUAL (FRENCH) INSTRUCTION MANUAL (GE, DU, IT)	F 9888	w	0756 0757 0758 0759		B30-0 B30-0 B30-		LED(LN31GCPH(U)) LED(SLP-981C-51) LED(SEL2910A) LED(SLP-981C-51)			
	** D12-0142-08 105-0332-08 015-0333-08 015-0334-08 039-000-00	VULLEY BELT			C501,502 C503 C701,702 C703,704 C705		CC458 CE041 CK454	CC45FSL1H221J CE04KW1H010M CE04KW1E222M CK45FF1H103Z C90-1872-05	CERAMIC 220PF J BLECTRO 1.00P 56 2200UF 25 CERAMIC 0.010UF Z BLECTRO 1000UF 25	550WV 256WV 25WV		
	9660-	BJECT MECHANISM ASSY			C706 C707		CK45		0.010UF Z	244		
	* E35-0377-05 * E35-0378-05	FLAT CABLE X25(CN6) FLAT CABLE MECHA-X25(CN1) AC PANER CAR	t .		C708, 709 C710 C711		CE042	CF92FV1H104J CE04KW1V100M CF92FV1H103J	ELECTRO 10UF 35	3547		
	mm	200	or⊢ N		C712 C713		CK45		0.10UF			
	E30-0505-05	AUDIG CORD CORD WITH PLUG			C715 C716		CK 45E	CEU4DWOJIOZE CEO4KWIVIODM CK45FFIHIO3Z	ELECTRO 1000 35 CERAMIC 0.010UF Z	>>>>>		
	* G01-3466-04 G13-0439-04	TORSION COIL SPRING CUSHION			C717 C718		CE04		47UF	255		
	## H50-0398-04 ## H50-0322-04	ITEM CARTÓN CASE ITEM CARTÓN CASE DAN VETVOENE ECAMEN BIXTIDE (F)		Σű	C720 C721		CF0 CF0 CF0 CF0 CF0 CF0 CF0 CF0 CF0 CF0	CEO4KWIN471M CF92FVIH103J CF92FVIH104J	ME CIRM 4700F 50	>		
	122	POLYSTYRENE FORMED FIXTURE (R) PROTECTION BAG (100X250)			C722 C723		CE04	CEO4KW1V100M CF92FV1H394J	BLECTRO 10UF 35	3547		
	H25-0232-04 H25-0232-04 H25-0368-04		0. 10	ω×	C725 C725		CK458					
	H25-0651-04	10N	F		C727 C728,729		CK45	-	0.010UF Z			
EL EL	# J11-0177-03 # J19-3504-15 # J19-3505-15	POWT CLARPER UNIT HOLDER UNIT HOLDER		w	C730 C731 C732		CB04) C91-0 CK45E	CK45FF1H103Z	BLECTRO 100UF 10 CERAMIC 0.1UF J CERAMIC 0.010UF Z	<b>^</b> **		
(jie	K:USA P:Canada T:England E:Europe	N:KX-9050 S:KX-9050S		]	L:Scandinavia Y:PX(Far East, Hawaii)	st, Hawaii)	K:USA T:England	P.Canada E:Europe	N:KX-9050 S:KX-9050S			1

	Description	也/施 華	KEY BOARD							
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nt gellefert.	Parts No.	* 4 4 4	S40-1064-05	HSS104 1SS133 HSS104 1SS133 S5686B	1SR139-100 KBP02ML-6127 S5688B 1SR139-100 HSS104	155133 556888 158139-100 HSS104 15S133	HSS104A 1SS131 HSS104 1SS133 HZS4.7N(B)	RD4.7BS(B) HSS104A 1SS131 HSS104 1SS133	HSS104A 1SS131 HZS6.8N(B2) RD6.9ES(B2) HSS104A	155131 HZS6, 8N(82) RD6, 8ES(82) HSS104A 15S131
ınıcı	Š,	*5								
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Telle ohne Parts No. werden nicht geliefert.	Ref. No.	* * *	5748-751	D51 -58 D51 -58 D91 -93 D91 -93 D701-704	D701-704 D705 D706 D706 D708	D709 D709 D709 D710-712 D710-712	0713,714 0713,714 0715 0715 0716	D716, 718 D717, 718 D719, 718 D719	D720-722 D720-722 D723 D723 D724	D724 D725 D725 D726-741 D726-741

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*	2 Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	50WV 250WV 50WV 50WV	354V 164V 504V 504V	35WV 35WV 50WV	5.5WV 50WV 35WV 35WV	K 35WV	SYNCR0 PHØNES			J 2W J 2W	1 1/48 3 28 3 28 3 28	J 1/4W HETER ADJ REC LEVEL BALANCE HONE LEVEL	XR/XS)
Description A 4 A	0.10F 0.010UF 10UF 0.1UF 100UF	1.00F 0.01UF 1.0UF 0.22UF 22PF	100F 220F 220UF 1.0UF	100UF 100UF 0.010UF 10UF 1.0UF	0.047F 0.33UF 3300PF 10UF 4.7UF	560PF 10UF	CONNCTOR CONNCTOR PHONE JACK	œ	8MHz	10KX4 4.7KX6 1000PX4 490 220	2.2K 39 10 6.8 6.8	7 4.7K) 50K) HEAD P	LAY H M@DE(XR/XS)
*	CERAMIC CERAMIC ELECTRO CERAMIC ELECTRO	FIECTRO FILM FIECTRO NP-ELEC CERAMIC	BLECTRO ELECTRO ELECTRO ELECTRO	BLECTRO BLECTRO CERAMIC ELECTRO	BACKUP BLECTRO MP ELECTRO ELECTRO	CERAMIC	FLAT CABLE FLAT CABLE MINIATURE P	WIRE CLAMPER	RESONATOR	MULTI-COMP MULTI-COMP MULTI-COMP FL-PROOF RS	RD FL-PROOF RS FL-PROOF RS FL-PROOF RS	RD TRIMMING POT. ( POTENTIONETER( POTENTIONETER	MAGNETIC RELA SLIDE SWITCH
Parts No. 数 事 事 事	C91-0700-05 CK45FF1H103Z CEO4KH1V100M C91-0700-05 CEO4KH1A101M	CBO4KW1H010M C91-1439-05 CBO4KW1H010M CBO4HW1HR22M CC45FSL1H220J	CEO4KW1V100M CEO4KW1C220M CEO4KW1C221M CEO4KW1H010M CEO4KW1H010M	CEG4KW1V100M CEG4KW1C101M CK45FF1H103Z CEG4KW1V100M CEG4KW1H010M	C90-1826-05 CEG4KW1HR33M CF92FV1H332J CEG4KW1V100M CEG4KW1V4R7M	CK45FB1H561K CE04KW1V100M	E40-4160-05 E40-4215-05 E11-0188-05 E11-0190-05	9600-		R90-0809-05 R90-0824-05 R90-0478-05 RS14KB3D471J RS14KB3D221J	RD14NB2E222J RS14KB3A390J RS14KB3D100J RS14KB3D6RBJ RS14KB3D6RBJ	RD14NB2E470J R12-1619-05 R06-4088-05 R05-5045-05 R10-4042-05	S51-2093-05 S31-2094-05
Per ts												* *	
Address (**							## ##						
Ref. No.	C733 C734,735 C736,737 C738 C739,740	C741 C742 C801,802 C807,808 C809,810	C811,812 C813 C814 C815 C621,022	C823,824 C831,832 C833,834 C901	0904 0951,952 0953,954 0955,956	C959 C960-963	CN1 CN6 J51 J81	,	X1	CP1 CP2 CP3 ,4 R703 R705	R706 R754 R757 R763	R828,829 VR95 VR101 VR102 VR103	K1 S51

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### **PARTS LIST**

* New Parts	Parts without Parts No. are not supplied.	Les articles non mentionnes dans le Parts No. ne sont pas fournis.	Talia chea Darte Na mandan afett aglafart

16WV 10WV 35WV 35WV	3 3 3 3 5 8 5 8 8 8 8	35 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	3 3 5 8 4 V 5 5 0 4 V	354V 354V	הממנות	ראמיני	1087 3587 3587 3	77875 28 28 28	358V 358V 3	J SOWV 35WV
3300F 2200F 4.70F 100F 2200PF	0.56UF 0.33UF 100UF 10UF 0.1UF	100F 2200PF 0.56UF 0.33UF 10UF	1800PF 3300PF 220UF 4700PF 1.0UF	100F 68PF 0.100F 3300PF	1000FF 22000FF 68000FF 18000FF	2200PF 560PF 2200PF 330PF 0.022UF	330UF 100F 100PF 680PF 0.010UF	0.082UF 0.022UF 10UF 0.010UF	100UF 10UF 10PF 0.015UF 2200PF	5600PF 0.47UF 10UF
BLECTRO ELECTRO ELECTRO ELECTRO	MF ME ELECTRO ELECTRO	BLECTRO MF MF MF BLECTRO	MF MF BLECTR® MF ELECTR®	ELECTRO CERAMIC MF ELECTRO POLYSTY	PILLA ARRENTA ARRENTA	발발발발	BLECTRO ELECTRO FILM CERAMIC	MF HEELECTRO CERAMIC POLYPRO	BLECTRO BLECTRO CERANIC NF	MF ELECTRO ELECTRO
CEO4KW1C331M CC604KW1A221M CC04KW1V47M CEO4KW1V100M CF92FV1H222J	CF92FV1H564J CF92FV1H334J CE04KW1E101M CE04KW1V100N CE04KW1V1	CEO4KW1V100M CF92FV1H223 CF92FV1H5643 CF92FV1H3343 CEO4KW1V100M	CF92FV1H182J CF92FV1H332J CE04KW1E221M CF92FV1H472J CE04KW1H010M	CEO4KWIVIOOM CC45FSL1H680J CF92FV1H104J CEO4KWIVIOOM CQ09FSIH332J	C91-1432-05 CF92FV1H682J CF92FV1H222J CF92FV1H682J CF92FV1H182J	CF92FV1H222J CF92FV1H261J CF92FV1H222J CF92FV1H331K CF92FV1H223J	CEO4KW1A331M CEO4KW1V100M C91-1432-05 CK45FB1H601K CF92FV1H103J	CF92FV1H623J CF92FV1H223J CE04KW1V100M CK45FF1H103Z C91-0774-05	CEO4KWICTOIM CEO4KWIVIOOM CC45FSL2HIOOD CF92FVIHI53J CF92FVIH222J	CE04KW1HR47M CE04KW1HR47M CE04KW1V100M
				*						
C22 ,23 C24 ,25 C41 ,42 C43 ,44 C45 -48	C49 ,50 C51 ,52 C53 ,54 C101,102	C105,106 C107-110 C111,112 C113,114	C117, 118 C119, 120 C131, 132 C201, 202 C203, 204	C205,206 C207,208 C209,210 C211,212	C215,216 C217,218 C219,220 C221,222 C223,224	C225,226 C227,228 C229,230 C231,232 C241,242	C243,244 C241-304 C301-304 C307,306	C309,310 C311,312 C313,314 C315	C317 C318 C319 C320 C321, 322	C323 C324 C325
	.23 CEO4KW1C331M ELECTRO 330UF 16 CEO4KW1A221M ELECTRO 220UF 10 CEO4KW1V4R7M ELECTRO 4.7UF 35 CEO4KW1V100M ELECTRO 10UF 35 CF92EV1H2223 MF	23 CEC4KW1C331M ELECTRO 220UF 1	.23 CEGAKNIC331M ELECTRO 220UF 1 .25 CEGAKNICA21M ELECTRO 220UF 1 .44 CEGAKNIVATOM ELECTRO 220UF 1 .45 CEGAKNIVATOM ELECTRO 220UF 3 .50 CF92FVIH334J MF 0.56UF J .54 CEGAKNIVATOM ELECTRO 100UF 3 .54 CEGAKNIVATOM ELECTRO 100UF 3 .54 CEGAKNIVATOM ELECTRO 10UF 3 .55 CEGAKNIVATOM ELECTRO 10UF 3 .56 CEGAKNIVATOM ELECTRO 10UF 3 .51 CEGAKNIVATOM ELECTRO 10UF 3 .52 CEGAKNIVATOM ELECTRO 10UF 3 .53 CEGAKNIVATOM ELECTRO 10UF 3	.23 CEGAKNIC331M ELECTRO 220UF 1.25 CEGAKNIVAR7M ELECTRO 220UF 1.44 CEGAKNIVAR7M ELECTRO 10UF 320UF 3.44 CEGAKNIVAR7M ELECTRO 10UF 3.20 CF92FYIH34.3 MF 0.33UF 3.20 CF92FYIH34.3 MF 0.33UF 3.30 CF92FYIH37.3 MF 0.30 CF92FY	.23 CEGAKNIC331M ELECTRO 220UF 1 .24 CEGAKNIC421M ELECTRO 220UF 1 .44 CEGAKNIVATOM ELECTRO 220UPF 1 .45 CEGAKNIVATOM ELECTRO 10UF 3 .50 CF92FVIH334J MF 0.33UF 3 .54 CEGAKNIVATOM ELECTRO 10UF 3 .54 CEGAKNIVATOM ELECTRO 10UF 3 .55 CEGAKNIVATOM ELECTRO 10UF 3 .56 CEGAKNIVATOM ELECTRO 10UF 3 .5106 CF92FVIH422J MF 220UPF 3 .5106 CF92FVIH434J MF 0.33UF 3 .5106 CF92FVIH434J MF 0.33UF 3 .5107 CF92FVIH434J MF 0.33UF 3 .5108 CF92FVIH434J MF 0.33UF 3 .5109 CF92FVIH434J MF 0.33UF 3 .5100 CF92FVIH434J MF 0.33UF 3 .5100 CF92FVIH434J MF 0.35UF 3 .5100 CF92FVIH434J MF 0.35UF 3 .5100 CF92FVIH434J MF 0.35UF 3 .5100 CF92FVIH434J MF 0.55UF 3 .5100 CF92FVIH434J MF 0.55UF 3 .5100 CF92FVIH400J MF 0.50UF 3 .5100 CF92FVIH400J MF 0.50UF 3 .5100 CF92FVIH00J MF 0.50UF 3 .51	CECAKNIC331M ELECTRO 220UF 1  44 CECAKNIA221M ELECTRO 220UF 1  44 CECAKNIA77M ELECTRO 220UF 1  45 CECAKNIA77M ELECTRO 10UF 3  55 CECAKNIA7400M ELECTRO 10UF 3  56 CECAKNIA100M ELECTRO 10UF 3  57 CECAKNIA100M ELECTRO 10UF 3  510 CECAKNIA00M ELECTRO 10UF 3  5110 CECAKNIA00M ELECTRO 10UF 3  5111 CECAKNIA00M ELECTRO 10UF 3  5110 CECAKNIA00M ELECTRO 10UF 3  5111 CECAKNIA00M ELECTRO 10UF 3  5110 CECAKNIA00M ELECTRO 10UF 3  5111 CECAKNIA00M ELECTRO 10UF 3  5110 CECAKNIA00M ELECTRO 10UF 3  5111 CECAKNIA00M ELECTRO 10UF 3  5110 CECAKNIA00M ELECTRO 10UF 3  5111 CECAKNIA00M ELECTRO 10UF 3  5110 CECAKNIA00M ELECTRO 10UF 3  5111 CECAKNIA00M ELECTRO 600PF 3  5111 C	CEGAKWIC331M CEGAKWIC331M CEGAKWIC331M CEGAKWIC47M CEGAKWILC331M CEGAKWILC331M CEGAKWILC32M CEGAKWILC32M CEGAKWILC32M CEGAKWILC32M CEGAKWILC32M CEGAKWILC3CM CEGA	CEGAKWIC331M ELECTRO 220UF 1  44 CEGAKWIC331M ELECTRO 220UF 1  44 CEGAKWIC421 MF ELECTRO 220UF 1  45 CEGAKWILV100M ELECTRO 10UF 2  55 CEGAKWILV100M ELECTRO 10UF 3  510 CEGAKWILV100M ELECTRO 10UF 3  5110 CEGAKWILV100M ELECTRO 10UF 3  5111 CEGAKWILV100M ELECTRO 10UF 3  5110 CEGAKWILV100M ELECTRO 10UF 3  5111 CEGAKWILV100M ELECTRO 10UF 3  5110 CEGAKWILV100M ELECTRO 10UF 3  5111 CEGAKWILV100M ELECTRO 10UF 3  5110 CEGAKWILV100M ELECTRO 10UF 3  5111 CEGAKWILV100M ELECTRO 10UF 3  5110 CEGAKWILV100M ELECTRO 10UF 3  5111 CEGAKWILV100M ELECTRO 10UF 3  5110 CEGAKWILV100M ELECTRO 10UF 3  5111 CEGAKWILG22J MF 3000F 3  5110 CEGAKWILG22J MF 6600F 3  5111 CEGAKWILG23J MF 6600F 3  511 CEGAKWILG23J MF 6600F 3	CECAKWIC331M CECAKWIC331M CECAKWIC331M CECAKWIC47M CECAKWIC47M CECAKWIC47M CECCKIC 100F CECAKWIC47M CECAKWIC47M CECCKIC 100F CECAKWIC47M CECAKWIC47M CECCKIC 100F CECAKWIC47M CECAKWIC47M CECAKWIC47M CECAKWIC47M CECAKWIC47M CECAKWIC47M CECAKWIC47M	CEGAKNIC331M CEGAKNIC331M CEGAKNIC421M CEGAKNIC421M CEGAKNIC420 CEGAKNIC421M CEGAKNIC421M CEGAKNIC421M CEGAKNIC421M CEGAKNIC47M CEGAKNIC60 CEGA

E:Europe M:Other Areas	T:England X:Australia	Y:PX(Far East, Hawaii) Y:AAFES(Europe)
E.E.urope	T:England	Y:PX(Far East, Hawaii)
P.Canada	EUSA	Escandinavia

Les articles non me Telle onne Parts No.	nmentionnes dans No. werden nicht	es da	es articles non mentionnes dans le Paris No. ne sont pas foumils elle onne Parts No. werden nicht gellefert.	s fournis.	Z	No.5
Ref. No. 参照春号	Address 位庫	New Parts	Parts No. 概 m 电 49	Description 善品名/規格	Desti- nation 社 向	Re- marks 備考
1082 1095 1095 1096 1096			RC4565D-D NJM4565D RC4565D BA6138 BA17805T	IC OP AMP X2) IC OB AMP X2) IC OB AMP X2) IC OR AMP X2) IC CROOT AMP X2) IC (VOLTAGE RECULATOR)		
10702 10703 10704 10705,706			UPC7805AHF BA17812T BA6229 BA6209 BA10393	IC(VOLTAGE REGULATOR/ +5V) IC(VOLTAGE REGULATOR) IC(MOTOR DRIVER) IC(MOTOR DRIVER) IC(DUAL COMPALATOR)		
10708 10709 10709 10710		*	PST529D BA17805T UPC7805AHF CXP82320-1059 2SC2458(Y,GR)	ICCSYSTEM RESET) ICCV@LTAGE REGULATOR) ICCV@LTAGE REGULATOR/ +5V) ICCTAGE REGULATOR/ +5V) TRANSISTOR		
992 -97 995 -97 9700 9700			2SC3311A(Q,R) 2SC2458(Y,GR) 2SC3311A(Q,R) DTA143TS UN4116	TRANSISTOR TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR		
6701 6702 6703 6703			2581370 2581048(Y,GR) 25813094(Q,R) DTC124ES UN4212	TRANSISTOR TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR		
9704-706 9704-706 9707 9707 9709			25A1048(Y,GR) 25A1309A(Q,R) DTC143TS UN4216 DTC124ES	TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR		
9708 9709 9709 9710-712 9710-712			UN4212 2SC2458(Y, GR) 2SC3311A(Q, R) DTC113ZS UN4219	TRANSISTOR TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR		
0713 0714 0714 0715			2SC2458(Y, GR) 2SC3311A(Q, R) 2SA1048(Y, GR) 2SA1309A(Q, R) DTA143TS	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR		
9715 9716 9716			UN4116 2SC2458(Y, GR) 2SC3311A(Q, R)	TRANSISTOR TRANSISTOR TRANSISTOR		
A1 RE(	CORD/	_/P	W02-0975-05 AYBACK UNIT	(X26-1292-70: 9050,2-71	30508	(S
120 120 14 16 16 17 17			CC45FSL1H101J CF92FV1H222J CF92FV1H563J CE04KW1V100M CE04KW1C331M	CERAMIC 100PF J MF 2200PF J MF 0.056UF J ELECTRO 10UF 35WV ELECTRO 330UF 16WV		
C11 ,12 C13 ,14 C15 ,16 C20 ,21			CF92FV1H182J CF92FV1H82JJ CF92FV1H103J CK45FF1H223Z	MF 1800PF J MP 820PF J MF 0.010UF J CERANIC 0.022UF Z		
L:Scandinavia		] *	Ket ISA P-Canada			

A indicates safety critical components. P.Canada E.Europe W.Outer Neas

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### **PARTS LIST**

Parts without **Parts** No. are not supplied. Les articles non mentionnes dans le **Parts No.** ne sont pas fournis. Telle ohne **Parts No.** werden nicht geliefert.

Parts
CXA1330S CXA1330S NJM4565D-D RC4565D-D UPC1297CA
NJM4565D-D RC4565D-D TC4052BP XRU4052B TC9164N
TC9162N 2SK170(BL,V) 2SC2458(Y,GR) 2SC3311A(Q,R) DTC143TS
UN4216 DTC124ES UN4212 2SC2458(Y,GR) 2SC3311A(Q,R)
2SC2458(Y, GR) 2SC2458(Y, GR) 2SC3311A(Q, R) 2SC3940A(R, S) 2SC3246
DTC143TS UN4216 2SD1302(S, 2SD2061 2SB1370
DTC124ES UN4212 DTC113ZS UN4219 DTC124ES
DOI RY
CK73FB1H182K CE04KW1E221M CF92FV1H103J CK73FB1H182K CE04KW1E221M
CC73FSL1H221J CF92FV1H103J CE04KWIC220M CE04KWIC220M CF92FV1H104J
CEO4KW1V100M CF92FV1H224J CF92FV1H183J CF92FV1H104J CF92FV1H223J
CF92FV1H224J CF92FV1H105J
KUSA P.Canada T.England E.Europe

No.7

Parts without Parts No. are not supplied. Les articles non mentionnes dans le Parts No. ne sont pas fournis. Teile onne Parts No. werden nicht geliefert.

	1	Paris No.	<u>.</u>	Description		nation	Re-
報	*	中華	# 91	名/规	*	#	
		CEO4KW1V4R7M CEO4KW1C4R7M CEO4KW1C220M CEO4DW1C471M CEO4KW1C470M	ELECTRO ELECTRO ELECTRO ELECTRO ELECTRO	4.70F 4.70F 220F 4700F 470F	35WV 35WV 16WV 16WV 16WV		
		CEO4KW1V100M CEO4KW1E101M CEO4KW1C101M CEO4KW1A101M CF92FV1H104J	ELECTRO ELECTRO ELECTRO FLECTRO	100UF 100UF 100UF 100UF 0.10UF	354V 254V 164V 104V J		
		CE04KW1C220M CE04KW1B221M CE04KW1C101M CF92FV1H104J	BLECTRO BLECTRO BLECTRO	22UF 222UF 100UF 0.10UF	16WV 25WV 16WV 3		
		E13-0636-05	PHONG JACK 1	LINE I/0.	CD DIRECT		
		J11-0098-05	WIRE CLAMPER				
	*	L39-0190-05 L79-0792-05 L40-2235-29 L39-0190-05 L32-0545-05	TRAP COIL LC FILTER SMALL FIXED INDUCTOR(22MH , TRAP COIL BIAS OSCILATING COIL	INDUCTOR(	22MH , J)		
	*	L32-0544-05	OSCILATING CO	COIL			
	*	R92-0219-05 RS14KB3A470J RD14NB2E4R7J RD14NB2E102J RD14GB2E2R2JTS	FUSE RESIST PL-PROOF RS RD RD FL-PROOF RD	10 47 4.7 1.0K 2.2	0 1/4W 0 1/4W 0 1/4W 1/4W		
	* *	RD14GB2E2R2JTS RD14GB2E361JTS R12-0604-05 R12-3685-05 R12-3686-05	FL-PROOF RD FL-PROOF RD TRIMMING POT TRIMMING POT TRIMMING POT	2.2 360 (100) PB (10K) PB	J 1/4W J 1/4W LEVEL EQ ADJ LEVEL		w
		R12-3686-05 R12-5651-05	TRIMMING POT	.(22K) REC .(100K)BIAS	C LEVEL		
		HZS5.1S(B2) RD5.1JS(B2) HSS104 1SS133 HZS8.2N(B2)	ZENER DIØDE ZENER DIØDE DIØDE DIØDE ZENER DIØDE				
		RD8.2ES(B2) HZS8.2S(B2) RD8.2JS(B2) HZS8.2N(B2) RD8.2ES(B2)	ZENER DIØDE ZENER DIØDE ZENER DIØDE ZENER DIØDE ZENER DIØDE				
		HSS104 1SS133 HZS3.9N(B2) RD3.9ES(B2) HSS104	DIODE DIODE ZENER DIODE ZENER DIODE DIODE				
		15S133 NJM4565D-D RC4565D-D	DIODE IC(OP AMP X2 IC(OP AMP X2	~~			

N:KX-9050 S:KX-9050S P:Canada E:Europe M:Other Areas L:Scandinavia Y:PX(Far East, Hawaii) Y:AAFES(Europe)

A indicates safety critical components.

### **PARTS LIST**

0.47UF 0.022UF 0.10UF 0.018UF

CF92FV1H474J CF92FV1H23J CF92FV1H104J CF92FV1H183J CF92FV1H104J

1800PF 1000F 0.010UF 33UF 1000F

MF ELECTRO BLECTRO ELECTRO

CF92FV1H182J CE04KW1C101M CF92FV1H103J CE04KW1C330M CE04KW1C310M

C227, 228 C231, 232 C233, 234 C235, 236 C237, 238

1/104

0 6HM 0

CHIP R

R92-0670-05 R92-2052-05

LC FILTER

ELECTRO

CE04KW1V100M

L79-0792-05

L1 -4

MAGNETIC RELAY

551-2089-05

ZENER DIØDE ZENER DIØDE ZENER DIØDE ZENER DIØDE ZENER DIØDE

HZS8.2S(B2) RD8.2JS(B2) HZS5.1S(B2) RD5.1JS(B2) HZS6.2N(B2)

	pplied.	le Parts No no cont nee for
× New Parts	Parts without Parts No. are not supplied.	I as articles non mentionnes dans la Parts No na sont nas four

* New Parts	Parts without Parts No. are not supplied.	Les articles non mentionnes dans le Parts No. ne sont pas fournis.	Telle ohne Parts No. werden nicht geliefert.
		NO	2

Les articles non mentionnes dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert. Parts without Parts No. are not supplied.

Desti- Re-nation marks 仕向事業

Description 品名/规

Parts No. 常 祖 输

Address New Parts

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**华丽幸** 

1000PF 8200PF 0.22UF 0.082UF 0.015UF

0.10UF 0.47UF 0.22UF 0.10UF 220UF

MF MF MF ELECTRO

CF92FV1H104J CF92FV1H474J CF92FV1H224J CF92FV1H104J CE04KW1E221M

C173, 174 C175, 176 C177, 178 C179, 180 C181-184

0.33UF 0.082UF 0.47UF 0.10UF

CF92FV1H334J CF92FV1H623J CF92FV1H474J CF92FV1H104J CF92FV1H24J

C185,186 C187,188 C189,190 C191,192 C193,194

0.047UF 0.015UF 8200PF 1000PF 2200PF

CF92FV1H473J CF92FV1H153J CF92FV1H822J CF92FV1H102J CF92FV1H222J

C195, 196 C197, 198 C199, 200 C201, 202 C203, 204

470PF 1800PF 0.039UF 0.10UF 1800PF

CF92FV1H471J CF92FV1H182J CF92FV1H393J CF92FV1H104J CF92FV1H182J

C205, 206 C207, 208 C209, 210 C211, 212 C213-216

No. 10

	Ref.	#	C163, C165, C167, C169,	C173, C175, C177, C179,	C185, C189, C191, C191,	C195, C197, C199, C201,	C205, C207, C209, C211,	0217. 02217. 02221. 0223.	C227, C231, C233, C235,	C239 L1 -	2	200 000	101 103
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	œ	*											
	Desti-	1 龟											
		#	מטמטט	מפטפפ	J J J	החקחה	מטמטט	ממטטט	7.04.0 7.004.0	25WV 3 16WV 3	3 164V 3 164V	354V J	ט נו נו נו נו <del>נו</del>
	<u>.</u>	名/集	0.039UF 680PF 1000PF 8200PF 0.22UF	0.082UF 0.015UF 0.10UF 0.47UF 0.22UF	0.10UF 220UF 0.33UF 0.082UF 0.47UF	0.10UF 0.22UF 0.047UF 0.015UF 8200PF	1000PF 2200PF 470PF 1800PF 0.039UF	0.10UF 1800PF 0.47UF 0.022UF	0.018UF 0.10UF 1800PF 1.0UF 100PF	2200F 220PF 0.0100F 220F 3300PF	1800PF 100UF 220PF 0.010UF 22UF	0.10UF 10UF 0.22UF 0.018UF 0.10UF	0.022UF 0.22UF 1.0UF 0.039UF 680PF
	۵	*			LECTRO F	EEEEE	#####	44444 44444	MF MF MF BLECTRO	ELECTRO CHIP C MF ELECTRO	MF ELECTRO CHIP C MF ELECTRO	MP ELECTRO MP MP	실밀밀필필
1			부부부부	5556	EWEEE								
	Parts No.	中華 田 雅	CF92FV1H393J MF CF92FV1H681J MF CF92FV1H102J MF CF92FV1H822J MF CF92FV1H224J MF	CF92FV1H023J MF CF92FV1H104J MF CF92FV1H104J MF CF92FV1H474J MF CF92FV1H224J MF	CF92FV1H104J EI CB04KW1E221M EI CF92FV1H334J ME CF92FV1H823J ME CF92FV1H474J ME	CF92FV1H104J CF92FV1H224J CF92FV1H473J CF92FV1H153J CF92FV1H822J	CF92FV1H102J CF92FV1H222J CF92FV1H471J CF92FV1H182J CF92FV1H393J	CF92FV1H104J CF92FV1H182J CF92FV1H474J CF92FV1H223J CF92FV1H104J	CF92FV1H183J CF92FV1H104J CF92FV1H182J CE04KW1H010M CC73FSL1H101J	CE04KW1E221M CC73FS1.1H221J CF92FV1H103J CE04KW1C220M CF92FV1H332J	CF92FV1H182J CE04KW1C101M CC73FSL1H221J CF92FV1H103J CE04KW1C220M	CF92FV1H104J CE04KW1V100H CF92FV1H224J CF92FV1H183J CF92FV1H104J	H223 H224 H105 H393
	Parts	幸福	F92FV1H393J M F92FV1H681J M F92FV1H102J M F92FV1H822J M	F92FV1H623J M F92FV1H153J M F92FV1H104J M F92FV1H474J M	F92FV1H104J E E G E E E E E E E E E E E E E E E E	F92FV1H104J F92FV1H224J F92FV1H473J F92FV1H153J F92FV1H153J	92FV1H102J 92FV1H222J 92FV1H471J 92FV1H182J 92FV1H393J	F92FV1H1 F92FV1H1 F92FV1H4 F92FV1H2 F92FV1H1	F92FV1H183J F92FV1H104J F92FV1H182J E04KV1H010M C73FSL1H101J	E04KW1E221M C73FSL1H221J F92FV1H103J E04KW1C220M F92FV1H332J	F92FV1H182J E04KW1C101M C73FSL1H221J F92FV1H103J E04KW1C220M	F92FV1H104J B04KW1V100M F92FV1H224J F92FV1H183J F92FV1H104J	F92FV1H22 F92FV1H22 F92FV1H10 F92FV1H39
	ess New Parts	幸福	F92FV1H393J M F92FV1H681J M F92FV1H102J M F92FV1H822J M	F92FV1H623J M F92FV1H153J M F92FV1H104J M F92FV1H474J M	F92FV1H104J E E G E E E E E E E E E E E E E E E E	F92FV1H104J F92FV1H224J F92FV1H473J F92FV1H153J F92FV1H153J	92FV1H102J 92FV1H222J 92FV1H471J 92FV1H182J 92FV1H393J	F92FV1H1 F92FV1H1 F92FV1H4 F92FV1H2 F92FV1H1	F92FV1H183J F92FV1H104J F92FV1H182J E04KV1H010M C73FSL1H101J	E04KW1E221M C73FSL1H221J F92FV1H103J E04KW1C220M F92FV1H332J	F92FV1H182J E04KW1C101M C73FSL1H221J F92FV1H103J E04KW1C220M	F92FV1H104J B04KW1V100M F92FV1H224J F92FV1H183J F92FV1H104J	F92FV1H224 F92FV1H224 F92FV1H105 F92FV1H393
	New Parts	* 4 *	F92FV1H393J M F92FV1H681J M F92FV1H102J M F92FV1H822J M	F92FV1H623J M F92FV1H153J M F92FV1H104J M F92FV1H474J M	F92FV1H104J E E G E E E E E E E E E E E E E E E E	F92FV1H104J F92FV1H224J F92FV1H473J F92FV1H153J F92FV1H153J	92FV1H102J 92FV1H222J 92FV1H471J 92FV1H182J 92FV1H393J	F92FV1H1 F92FV1H1 F92FV1H4 F92FV1H2 F92FV1H1	F92FV1H183J F92FV1H104J F92FV1H182J E04KV1H010M C73FSL1H101J	E04KW1E221M C73FSL1H221J F92FV1H103J E04KW1C220M F92FV1H332J	F92FV1H182J E04KW1C101M C73FSL1H221J F92FV1H103J E04KW1C220M	F92FV1H104J B04KW1V100M F92FV1H224J F92FV1H183J F92FV1H104J	F92FV1H223 F92FV1H224 F92FV1H105 F92FV1H393

K:USA T:England X:Australia Y:PX(Far East, Hawaii) I:AAFES(Europe)

indicates safety critical components.

IC(DOLBY NR STYPE) IC(OP AMP X2)

CXA1417S NJM4565L-D

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RD6.2ES(B2) HZS13N(B2) RD13ES(B2) MA110 M5238L

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EEurope P:Canada

T:England

Y:PX(Far East, Hawaii) Y: AAFES(Europe)

Desti- Re-nation marks 在向無格

Description

幸 名

Parts No.

Address New Parts

参照者号 Ref. No.

No. 12

### **PARTS LIST**

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ERASE HEAD RECORD/PLAYBACK HEAD

T32-0325-05 T34-0343-05 RD14BB2C223

MAIN BELT REEL BELT PINCH ROLLER ASSY PINCH ROLLER ASSY REEL MOTOR ASSY

D16-0335-08 D16-0325-08 D14-0319-08 D14-0339-08 T42-0615-08

PAN HEAD MACHINE SCREW SCREW LEAF SWITCH FRONT END UNIT, ELECTRIC UNIT WIRE CLAMPER

N30-2630-46 N73-2004-46 S74-0005-08 W02-1147-08 J61-0094-08

33.35.4 33.35.5 33.5 33.5 33.5 33.5 33.5 33.5 33.5 33.5 33.5 33.5 33.5 33.5 33

FLAT WASHER FLAT WASHER FLAT WASHER FLAT WASHER

N19-1240-08 N19-1241-08 N19-1302-08 N19-1303-08 N19-1304-08

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118 116, 110, 28, 28, 28, 10, 10,

A indicates safety critical components.

M:Other Areas

E-E-urope

K:USA T:England X:Australia

Y:PX(Far East, Hawaii)

L.Scandinavia

Y:AAFES(Europe)

A indicates safety critical components

E:Europe M:Other Areas P.Canada

K:USA T:England X:Australia

Y:PX(Far East, Hawaii) Y:AAFES(Europe) L'Scandinavia

* New Parts	Parts without Parts No. are not supplied.	Les articles non mentionnes dans le Parts No. ne sont pas fournis.
		NI) 44

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### **SPECIFICATIONS**

Track system: 4-Track, 2-channel stereo
Recording system: AC Bias System
Heads: Record/play × 1
Erase × 1
Motors: DC motor × 4
Wow & flutter: 0.024% (W.R.M.S.)
Fast-winding time: About 75 seconds (C-60)
Frequency response (±3 dB) -20 dB recording:
Normal tape: 20 - 19.000 Hz
CrO <sub>2</sub> tape: 20 - 19.000 Hz
Metal tape: 20 - 22.000 Hz
Signal-to-noise ratio 80 dB (DOLBY S-type NR ON)
(KX-9050S only)
75 dB (Dolby C-type NR ON)
67 dB (Dolby B-type NR ON)
59 dB (Dolby NR OFF)
Harmonic distortion 0.7% (at 1 kHz,
0 VU with
metal tape)
Input sensitivity/Impedance
LINE IN: 77.5 mV/50 k ohms
<b>CD DIRECT</b> 460 mV/10 k ohms
Output level/Impedance
LINE OUT: 490 mV/1 k ohms
Headphones: 2.3 mW/8 ohms

General
Power consumption: 26 W (KX-9050)
23 W (KX-9050S)
<b>Dimensions:</b> W: 440 mm
H: 138 mm
D: 328 mm
Weight (Net):
7.3 kg (KX-9050)

We follow a policy of continuous advancements in development. For this reason these specifications may be changed without

# KENWOOD CORPORATION Shibuya Building, 17-5, 2-chome Shibuya, Shibuya-ku, Tokyo 150, Japan

KENWOOD U.S.A. CORPORATION 2201 East Dominguez Street, Long Beach, CA 90810; 550 Clark Drive, Mount Olive, NJ 07828, U.S.A. KENWOOD ELECTRONICS CANADA INC. P.O. BOX 1075, 959 Gana Court, Mississauga, Ontario, Canada L4T 4C2

TRIO-KENWOOD U.K. LIMITED KENWOOD House, Dwight Road, Watford, Herts., WD1 8EB United Kingdom

KENWOOD ELECTRONICS BENELUX N.V. Mechelsesteenweg 418 B-1930 Zaventern, Belgium

KENWOOD ELECTRONICS DEUTSCHLAND GMBH Rembrücker-Str. 15, 6056 Heusenstamm, Germany

TRIO-KENWOOD FRANCE S.A.

13 Boulevard Ney. 75018 Paris, France

KENWOOD LINEAR S.p.A.

20125, MILANO-VIA ARBE, 50, ITALY

KENWOOD ELECTRONICS AUSTRALIA PTY. LTD. IINCORPORATED IN N.S.W.) P.O. Box 504, 8 Figtree Drive, Australia Centre, Homebush, N.S.W. 2140, Australia

KENWOOD & LEE ELECTRONICS, LTD.

Wang Kee Building, 4th Floor, 34-37, Connaught Road, Central, Hong Kong